READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

23-A MECHANICAL RE-BID   09/13/2021

SYMBOLS & TAGS LEGEND

TAG	DESCRIPTION
101A	DOOR TAG
CASEWORK SERIES; NUMBER OF SHELVES; CABINET DEPTH; 3; 402; 30.00; 24.00; 84.00; CABINET WIDTH; CABINET HEIGHT	CASEWORK TAG *AS OUTLINED IN THE ARCHITECTURAL WOODWORK INSTITUTE (AWI) STANDARDS*
1t	SPECIALTY EQUIPMENT TAG
1 A	COLUMN LINE DESIGNATION TAG
REFERENCE 0'-0"	LEVEL ELEVATION TAG
P T	NORTH ARROW TAG T = TRUE NORTH P = PROJECT NORTH
ROOM 101	ROOM NAME & NUMBER TAG
1 A101	SECTION TAG
1 A101	CALLOUT / DETAIL
0'-0"	SPOT ELEVATION TAG
1 DRAWING TITLE DRAWING SCALE	DETAIL / DRAWING TITLE TAG
CLG-12 1'-0" TYPE HEIGHT	CEILING TAG
99	PARTITION TAG
?	MATERIAL TAG
1t	WINDOW TAG
12 6 6:12	ROOF SLOPE ANNOTATION
1 A101; 0 0.0 0 0	ELEVATION TAG
0 NEW CONSTRUCTION; 0 DEMOLITION	SPECIFIC NOTE

KEY TO MATERIALS

PATTERN	DESCRIPTION
	BRICK
	CMU MASONRY
	CONCRETE SECTION
	POROUS FILL
	EARTH
	PLYWOOD
	GYPSUM BOARD SECTION
	RIGID INSULATION
	BATT INSULATION
	END GRAIN LUMBER
	WOOD BLOCK OR SHIM
	FINISH WOOD

COMMON ABBREVIATIONS

SYMBOLS..........
& - AND
@ - AT
Ø - DIAMETER
□ - SQUARE

A..........
AB - ANCHOR BOLT
ABV - ABOVE
ACOUST - ACOUSTICAL
ACT - ACOUSTIC CEILING TILE
AFF - ABOVE FINISH FLOOR
AHJ - AUTHORITY HAVING JURISDICTION
ALUM - ALUMINUM
AP - ACCESS PANEL
APPROX - APPROXIMATELY
ARCH - ARCHITECTURAL

B..........
B.C. - BOTTOM CHORD
BLK - BLOCK
BLDG - BUILDING
BLKG - BLOCKING
BLKHD - BULKHEAD
BM - BEAM
B.O. - BOTTOM OF
BOD - BASIS OF DESIGN
BOT - BOTTOM
B.R. - BULLET RESISTANT
BRNG - BEARING

C..........
℄ - CENTER LINE
CFCI - CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI - CONTRACTOR FURNISHED, OWNER INSTALLED
CFLS - COUNTER FLASHING
CJ - CONTROL JOINT
CL - CLOSET
CLG - CEILING
CMU - CONCRETE MASONRY UNIT
CND - CONDUIT
COL. - COLUMN
COOR - COORDINATE
CONC - CONCRETE
CONSTR - CONSTRUCTION
CONT - CONTINUOUS
C.T. / CT - CERAMIC TILE
CPT - CARPET / CARPET TILE
CTSK - COUNTERSUNK
CU - CUBIC
CU FT - CUBIC FOOT
CU YD - CUBIC YARD

D..........
D - DEEP / DEPTH
DEG - DEGREE
DIA - DIAMETER
DIM - DIMENSION
DL - DEAD LOAD
DMPR - DAMPER
DN - DOWN
DOCS - DOCUMENTS
DR - DOOR
DS - DOWNSPOUT
DTL - DETAIL
DWG - DRAWING

E..........
EA - EACH
EIFS - EXTERIOR INSULATION AND FINISHING SYSTEM
ELEC - ELECTRICAL
EL - ELEVATION
ELEV - ELEVATION
ELMA - ELEVATOR MACHINE ROOM
EJ - EXPANSION JOINT
ENT - ENTRANCE, ENTRY
EQ - EQUAL
EST - ESTIMATE
EW - EACH WAY
EXST - EXISTING
EXT - EXTERIOR
EXP - EXPOSED
EXP JT - EXPANSION JOINT

F..........
F - FAHRENHEIT
FCP - FIBER CEMENT PANEL
FD - FLOOR DRAIN
F.E. - FIRE EXTINGUISHER
F.E.C. - FIRE EXTINGUISHER CABINET
FF - FINISHED FLOOR
FF EL - FINISHED FLOOR ELEVATION
FG - FINISHED GRADE
FHY - FIRE HYDRANT
FDC - FIRE DEPARTMENT CONNECTION
FIN - FINISH
FIN FL - FINISHED FLOOR
FL - FLOOR
FLEX - FLEXIBLE
FLUOR - FLUORESCENT
FND - FOUNDATION
FPM - FEET PER MINUTE
FRT - FIRE RETARDANT TREATED
FSK - FOIL SCRIM KRAFT
FT - FEET, FOOT
FT - FLOOR TRANSITION
FTG - FOOTING

G..........
GA - GAGE, GAUGE
GALV - GALVANIZED
GL - GLASS, GLAZING
GND - GROUND
GRTG - GRATING
GWB - GYPSUM WALL BOARD

H..........
H - HIGH / HEIGHT
HC - HANDICAPPED
HD - HEAD
HM - HOLLOW METAL
HORIZ - HORIZONTAL
HR - HOUR
HT - HEIGHT

I..........
ID - INSIDE DIAMETER
IN - INCH
INFO - INFORMATION
INSUL - INSULATION

J..........
JB - JUNCTION BOX
JM - JAMB
JST - JOIST
JT - JOINT

L..........
LG - LONG
LL - LIVE LOAD
LSC - LIFE SAFETY CODE
LTG - LIGHTING

M..........
MACH - MACHINE
MAT'L - MATERIAL
MAX - MAXIMUM
MBT - MARBLE THRESHOLD
MECH - MECH
MEP - MECHANICAL / ELECTRICAL / PLUMBING
MFGR - MANUFACTURER
MH - MANHOLE
MIN - MINIMUM
MO - MASONRY OPENING
MSNRY - MASONRY
M.T. - METAL THRESHOLD
MTL - METAL
MTD - MOUNTED

N..........
NA - NOT APPLICABLE
NIC - NOT IN CONTRACT
NO - NUMBER
NTS - NOT TO SCALE

O..........
O/C - ON CENTER
OD - OUTSIDE DIAMETER
OFIC - OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED, OWNER INSTALLED
OPNG - OPENING
OPP - OPPOSITE
OPP HND - OPPOSITE HAND
OV - OVER
OVHD - OVERHEAD

P..........
P.LAM - PLASTIC LAMINATE
PLY - PLYWOOD
PLYWD - PLYWOOD
PNL - PANEL
PNLBD - PANELBOARD
PNT/ PT - PAINT
POLYISO - POLYISOCYANURATE
PRESS - PRESSURE
PROJ - PROJECT
PROP - PROPERTY
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PT - PRESSURE TREATED
PTD - PAINTED
PVC - POLYVINYL CHLORIDE
PVMT - PAVEMENT
PWT - PREFABRICATED WOOD TRUSS

R..........
R - RADIUS
RCP - REFLECTED CEILING PLAN
REINF - REINFORCING, REINFORCED
RES - RESINOUS
REQD - REQUIRED
REV - REVISION
RGD - RIGID
RM - ROOM
RO - ROUGH OPENING
RST - REINFORCING STEEL

S..........
SB - SMART BOARD
SCD - SEE CIVIL DRAWINGS
SCHED - SCHEDULE
SD - STORM DRAIN
SED - SEE ELECTRICAL DRAWINGS
SECT - SECTION
SF - SQUARE FOOT
SI - SQUARE INCH
SIM - SIMILAR
SLP - SLOPE
SMD - SEE MECHANICAL DRAWINGS
SPCL - SPECIAL
SPEC - SPECIFICATIONS
SPLY - SUPPLY
SQ - SQUARE
SS - STAINLESS STEEL
SSD - SEE STRUCTURAL DRAWINGS
ST - STREET
STD - STANDARD
STL - STEEL
STOR - STORAGE
STRUCT - STRUCTURAL
SURF - SURFACE
SUSP - SUSPENDED
SW - SWITCH
SYS - SYSTEM

T..........
T & B - TOP AND BOTTOM
T.B. - TACK BOARD
T.B.D. - TO BE DETERMINED
TEMP - TEMPERATURE
THK - THICK
THRES - THRESHOLD
T&G - TONGUE & GROOVE
T0 - TOP OF
TOB - TOP OF BEARING POINT
TOC - TOP OF CONCRETE
TOF - TOP OF FOOTING
TOM - TOP OF MASONRY
TOP - TOP OF PAVEMENT, PARAPET
TOS - TOP OF STEEL
TRTD - TREATED
T.S. - TRANSITION STRIP
TYP - TYPICAL

U..........
UGND - UNDERGROUND
UL - UNDERWRITERS LAB
UNO - UNLESS NOTED OTHERWISE
UON - UNLESS OTHERWISE NOTED

V..........
VB - VAPOR BARRIER
VCT - VINYL COMPOSITION TILE
VERT - VERTICAL
VIF - VERIFY IN FIELD
VOL - VOLUME

W..........
W - WIDE / WIDTH
W/ - WITH
W/0 - WITHOUT
W.B. - WHITEBOARD
WD - WOOD
WR - WATER RESISTANT
WTRPRF - WATERPROOF
WWF - WELDED WIRE FABRIC
WWM - WELDED WIRE MESH

THIS LIST OF ABBREVIATIONS IS A GUIDE TO ABBREVIATIONS WHICH MAY BE USED IN THESE DOCUMENTS. ABBREVIATIONS NOT LISTED MAY ALSO BE USED.

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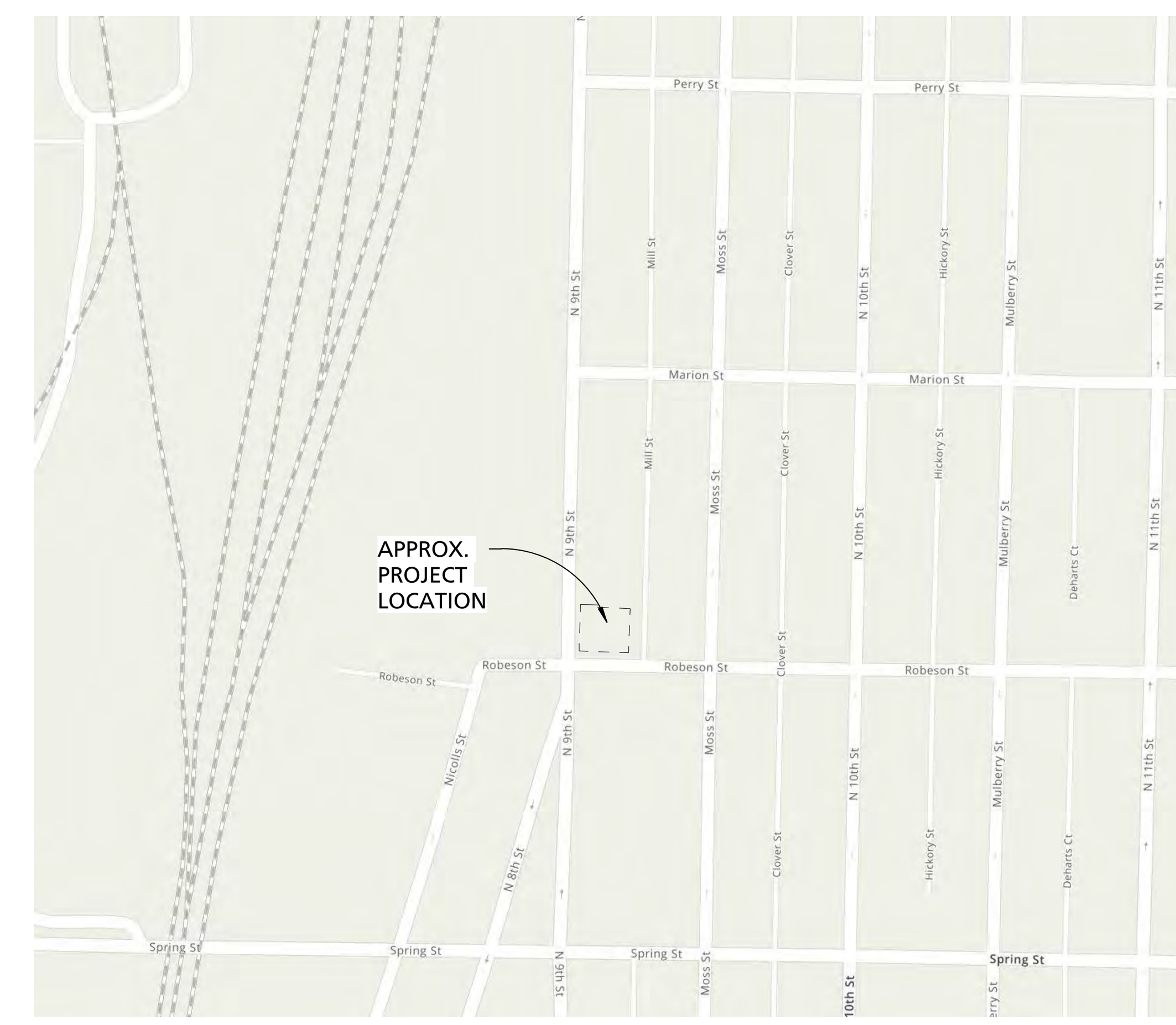
CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

THE INTENT OF THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL; PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED ONLY TO THE EXTENT CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INDICATED/INTENDED RESULTS. IN THE CASE OF INCONSISTENCIES BETWEEN THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.



VICINITY MAP
NOT TO SCALE

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: COVER SHEET
SHEET NUMBER: G000

7/20/2021 11:45:56 AM

ARCHITECT DRAWING INDEX

SHEET NUMBER	SHEET NAME
GENERAL / CODE	
G000	COVER SHEET
G001	DRAWING INDEX
G002	CODE ANALYSIS
G003	CODE DIAGRAMS
G004	CODE PLAN
G005	TYPICAL ACCESSIBILITY GUIDELINES
ARCHITECTURAL - NEW WORK	
A100	ARCHITECTURAL SITE DIAGRAM
A101	SITE SLAB & SIDEWALK DIAGRAM
A102	REFERENCE PLAN - FIRST FLOOR
A103	REFERENCE PLAN - MEZZANINE
A104	REFERENCE PLAN - SECOND FLOOR
A105	DIMENSION PLAN - FIRST FLOOR
A106	DIMENSION PLAN - MEZZ. & SECOND FLOOR
A107	BUILDING ASSEMBLY TYPES & DETAILS
A108	SLAB/MASONRY DIAGRAM - FIRST FLOOR
A109	SLAB/MASONRY DIA. - MEZZ & SECOND FLOOR
A110	PLAN DETAILS
A111	PLAN DETAILS
A112	FINISH PLAN - FIRST FLOOR & DETAILS
A113	FINISH PLAN - MEZZ & SECOND FLOOR
A114	FFE FIRST FLOOR PLAN, SCHEDULE & DETAILS
A115	FFE MEZZANINE & SECOND FLOOR
A116	SITE DETAILS
A117	SITE DETAILS
A118	SITE DETAILS
A200	BUILDING ELEVATIONS
A300	BUILDING SECTIONS
A301	BUILDING SECTIONS
A302	BUILDING SECTIONS
A400	WALL SECTIONS
A401	WALL SECTIONS
A402	WALL SECTIONS
A403	WALL SECTIONS
A404	WALL SECTIONS
A405	FOUNDATION/SLAB DETAILS
A406	STAIR DETAILS
A407	STAIRS & ELEVATOR DETAILS
A408	STAIR & FIRE POLE DETAILS
A409	FIRE POLE DETAILS
A500	ROOF PLAN
A501	ROOF DETAILS
A502	ROOF DETAILS
A503	ROOF DETAILS
A504	ROOF DETAILS
A505	ROOF DETAILS - ROOF TOP ACCESS ENCLOSURE
A506	ROOF DETAILS - COURTYARD
A600	DOOR/WINDOW SCHEDULE & TYPES
A601	DOOR HARDWARE
A602	DOOR HARDWARE
A603	DOOR & WINDOW DETAILS
A604	FOUR-FOLD/OVERHEAD DOOR DETAILS
A605	EXT CURTAIN WALL & STOREFRONT ELEVATIONS
A606	EXTERIOR CURTAINWALL DETAILS
A607	EXTERIOR STOREFRONT DETAILS
A608	EXTERIOR STOREFRONT DETAILS
A609	INTERIOR STOREFRONT ELEVATIONS & DETAILS
A610	LOUVER SCHEDULE & DETAILS
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A702	ENLARGED PLANS & INT. ELEVATIONS
A703	ENLARGED PLANS & INT. ELEVATIONS
A704	ENLARGED PLANS & INT. ELEVATIONS
A705	ENLARGED PLANS & INT. ELEVATIONS
A706	ENLARGED COURTYARD PLAN & ELEVATIONS
A800	RCP - FIRST FLOOR
A801	RCP - MEZZ & SECOND FLOOR
A802	CEILING DETAILS
A900	TYPICAL ADA SIGNAGE DETAILS
A901	MOCK-UP PANELS
A902	MOCK-UP PANELS
A903	MOCK-UP PANELS

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S102	MEZZANINE FRAMING PLAN
S103	SECOND FLOOR FRAMING PLAN
S104	ROOF FRAMING PLANS
S201	GENERAL NOTES & SCHEDULES
S301	TYPICAL DETAILS
S302	TYPICAL DETAILS
S303	TYPICAL DETAILS
S304	TYPICAL DETAILS
S305	TYPICAL DETAILS
S401	SECTIONS
S402	SECTIONS
S403	SECTIONS
S404	SECTIONS
S405	SECTIONS
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M1.03	SECOND FLOOR HVAC PLAN
M1.04	ROOF HVAC PLAN
M1.05	HVAC REFLECTED CEILING PLANS
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M1.11A	FIRST FLOOR RADIANT FLOOR PLAN
M1.12	MEZZANINE MECHANICAL PIPING
M1.13	SECOND FLOOR / PARTIAL ROOF MECHANICAL PIPING
M4.01	HVAC SCHEDULES
M4.02	HVAC SCHEDULES
M5.01	SEQUENCE OF OPERATIONS
M5.02	SEQUENCE OF OPERATIONS
M6.01	HVAC DETAILS
M6.02	HVAC DETAILS
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P1.02	MEZZANINE SANITARY PLAN
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P1.04	ROOF SANITARY PLAN
P1.11	FIRST FLOOR DOMESTIC PLAN
P1.12	MEZZANINE DOMESTIC PLAN
P1.13	SECOND FLOOR & PARTIAL ROOF DOMESTIC PLAN
P1.21	FIRST FLOOR NATURAL GAS PLAN
P1.22	MEZZANINE NATURAL GAS PLAN
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P1.33	SECOND FLOOR STORM WATER PLAN
P1.34	ROOF STORM WATER PLAN
P3.01	WASTE & VENT RISER DIAGRAMS
P3.11	DOMESTIC RISER DIAGRAM
P3.21	NATURAL GAS RISER DIAGRAM
P3.31	STORM WATER RISER DIAGRAM
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P6.03	PLUMBING DETAILS
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F1.02	MEZZANINE FIRE PROTECTION PLAN
F1.03	SECOND FLOOR FIRE PROTECTION PLAN
F6.01	FIRE PROTECTION DETAIL SHEET
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ELECTRICAL - NEW WORK	
E1.00	ELECTRICAL NEW WORK SITE PLAN
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E2.02	SECOND FLOOR LIGHTING PLAN
E3.00	FIRST FLOOR POWER PLANS
E3.01	MEZZANINE LEVEL POWER PLANS
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E6.00	ELECTRICAL PANEL SCHEDULES
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AL - 101	GENERAL REQUIREMENTS
AL - 102	FIRST FLOOR & MEZZ. WIRING DIAGRAMS
AL - 103	SECOND FLOOR WIRING DIAGRAM
AL - 104	TYPICAL DETAILS

OWNER DRAWING INDEX

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GENERAL / CODE	
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LD-1	GENERAL NOTES
LD-1A	CROSS SECTIONS
LD-2	OVERALL EXISTING CONDITION PLAN
LD-3	EXISTING CONDITION & DEMOLITION PLAN
LD-4	SITE PLAN
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LD-6	UTILITY PLAN
LD-6A	LIGHTING PLAN
LD-7	PROFILES SHEET
LD-8	DETAIL SHEET
LD-9	DETAIL SHEET
LD-10	TURNING TEMPLATE
LD-11	TURNING TEMPLATE
LD-12	EXISTING PARKING EXHIBIT
LD-13	PROPOSED PARKING EXHIBIT
PCSM-1	EXISTING CONDITIONS
PCSM-2	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
PCSM-3	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
CIVIL - EROSION & SEDIMENTATION CONTROL PLAN	
ES CS	E&S COVER SHEET
ES-1	EXISTING CONDITION PLAN
ES-2	EROSION AND SEDIMENT CONTROL PLAN
ES-3	EROSION AND SEDIMENT CONTROL DETAIL SHEET 1
ES-4	EROSION AND SEDIMENT CONTROL DETAIL SHEET 2
CIVIL - LOW VOLUME DRIVEWAY	
1 OF 10	COVER SHEET
2 OF 10	GENERAL NOTES
3 OF 10	DETAIL SHEET
4 OF 10	EXISTING CONDITION PLAN
5 OF 10	BASELINE GEOMETRY PLAN
6 OF 10	SITE PLAN
7 OF 10	CROSS SECTIONS
8 OF 10	PROPOSED DRIVEWAY PROFILE
9 OF 10	EXISTING PARKING EXHIBIT
10 OF 10	PROPOSED PARKING EXHIBIT
CIVIL - FLASHING WARNING DEVICE	
2 OF 2	FLASHING WARNING DEVICE PLAN
GEOTECH - TEMPORARY EXCAVATION SUPPORT SYSTEM	
100	COVER SHEET
101	SITE PLAN
102	WALL PROFILE
103	TYPICAL CROSS SECTION

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1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: DRAWING INDEX

SHEET NUMBER: G001

7/29/2021 2:09:10 PM

INTERNATIONAL BUILDING CODE 2015

USE CLASSIFICATIONS - CHAPTER 3

B: BUSINESS - OFFICE SPACE
R2: RESIDENTIAL - DORMITORY
S2: STORAGE - APPARATUS BAY/ANCILLARY STORAGE AREAS

BUILDING HEIGHT & AREA - CH.5

HEIGHT TABULAR	STORIES TABULAR	AREA TABULAR
B - 75'	B - 4	B - 69,000
S-2 - 75'	S-2 - 4	S-2 - 78,000
R2 - 75'	R2 - 5	R2 - 48,000
HEIGHT ALLOWED	STORIES ALLOWED	AREA ALLOWED
75'	4	48,000
HEIGHT ACTUAL	STORIES ACTUAL	AREA ACTUAL
43' 6"	2	15,903 GSF

SECTION 505 - MEZZANINES & EQUIPMENT PLATFORMS

505.2.1, EXCEPTION #2 -THE AGGREGATE AREA OF MEZZANINES IN BUILDINGS OF TYPE II CONSTRUCTION SHALL NOT BE GREATER THAN ONE-HALF OF THE FLOOR AREA OF THE ROOM IN BUILDINGS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM.

AGGREGATE MEZZANINE AREA: 1,603 SF
MEZZANINE 200.1 - 1,173 SF
STORAGE 200.3 - 294 SF
POLE MEZZ. 200.2 - 136 SF

APPARATUS BAY - 3,701 SF / 2 = 1,850 SF > 1,603 SF

505.2.3 OPENNESS, EXCEPTIONS #1 - MEZZANINES OR PORTIONS THEREOF ARE NOT REQUIRED TO BE OPEN TO THE ROOM IN WHICH THE MEZZANINES ARE LOCATED, PROIVDED THAT THE OCCUPANT LOAD OF THE AGGREGATE AREA OF THE ENCLOSED SPACE IS NOT GREATER THAN 10.

SECTION 508 - MIXED USE & OCCUPANCY

508.1 - EACH PORTION OF A BUILDING SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. WHERE A BUILDING CONTAINS MORE THAN ONE OCCUPANCY GROUP, THE BUILDING OR PORTION THEREOF SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF SECTION 508.2, 508.3, OR 508.4.

508.3 NONSEPARATED OCCUPANCIES -
BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED AS NONSEPARATED OCCUPANCIES.

508.3.3 - SEPARATION. NO SEPARATION IS REQUIRED BETWEEN NONSEPARATED OCCUPANCIES.

EXCEPTION 2, GROUP R-2 SHALL BE SEPARATED FROM OTHER DWELLING OR SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN ACCORDANCE WITH REQUIREMENTS OF SECTION 420.

420.2 SEPARATION WALLS - WALLS SEPARATING DWELLING OR SLEEPING UNITS SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708.

420.3 HORIZONTAL SEPARATION - FLOOR ASSEMBLIES SEPARATING DWELLING OR SLEEPING UNITS SHALL BE CONSTRUCTED AS HORIZONTAL ASSEMBLIES IN ACCORDANCE WITH SECTION 711.

CONSTRUCTION TYPE - CH.6

CONSTRUCTION TYPE: IIB FULLY-SPRINKLERED

TABLE 602, FIRE RESISTANCE RATING FOR EXTERIOR WALLS -

FIRE SEPARATION DISTANCE:
5'<X<10' = 1 HOUR FOR OCCUPANCY GROUP B,R,S2.
10'<X<30' = 0 HOUR

CHAPTER 10 - MEANS OF EGRESS

SECTION 1004 - OCCUPANT LOAD

ACCESSORY STORAGE AREAS, MECHANICAL, EQUIPMENT ROOMS
-300 GROSS
ASSEMBLY, UNCONSECRATED (TABLES & CHAIRS)
-15 NET
BUSINESS AREAS
-100 GROSS
DORMITORIES
-50 GROSS
EXERCISE ROOMS
-50 GROSS
PARKING GARAGES
-200 GROSS
RESIDENTIAL
-200 GROSS

1004.5 OUTDOOR AREAS -
YARDS, PATIOS, COURTS, AND SIMILAR OUTDOOR AREAS ACCESSIBLE TO AND USEABLE BY THE BUILDING OCCUPANTS SHALL BE PROVIDED WITH MEANS OF EGRESS AS REQUIRED BY THIS CHAPTER. THE OCCUPANT LOAD OF SUCH OUTDOOR AREAS SHALL BE ASSIGNED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE ANTICIPATED USE.

EXCEPTION 1: OUTDOOR AREAS USED EXCLUSIVELY FOR SERVICE OF THE BUILDING NEED ONLY HAVE ONE MEANS OF EGRESS.

PER REVIEW WITH FIRE MARSHAL ON MARCH 29, 2021 IT WAS DETERMINED THAT THE OCCUPANT LOAD OF THE COURTYARD WILL BE THE NUMBER OF EMPLOYEES WORKING AT THE BUILDING AT ANY GIVEN TIME (APPROXIMATLEY 12.) AN OCCUPANT VALUE OF 15 NSF PER PERSON WAS ASSIGNED TO THIS AREA, FOR A TOTAL COURTYARD OCCUPANCY OF 49 PERSONS. THIS NUMBER IS GREATER THAN THE EXPECTED TOTAL NUMBER OF EMPLOYEES WORKING AT THE BUILDING ON ANY GIVEN TIME. THE EGRESS PLAN HAS IMPLEMENTED THE GREATER NUMBER (49) IN THE DESIGN OF THE BUILDINGS EGRESS SYSTEM.

ROOF TOP ACCESS STAIR
1011.2 - WIDTH AND CAPACITY. STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36".

SECTION 1005.3.1 EGRESS SIZING, STAIRWAYS.
THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OFF EGRESS CAPACITY OF FACTOR OF .3 INCHES, AND NOT LESS THAN 44 INCHES IN WIDTH PER SECTION 1011.2.

SECTION 1005.3.2, MEANS OF EGRESS CAPACITY
THE CAPACITY IN INCHES OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OR .2 INCHES.

SECTION 1006, NUMBER OF ACCESS DOORWAYS

SECTION 1007.1.1, EXIT SEPARATION DISTANCE
EXCEPTION 2: WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM, THE SEPARATION DISTANCE SHALL NOT BE LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL OF THE AREA SERVED.

SECTION 1020, CORRIDORS
PER TABLE 1020.1 FIRE RATING IS ONLY REQUIRED FOR ANY CORRIDORS SERVING "R" OCCUPANCY. FIRE RATING SHALL BE 1/2 HOUR. CORRIDORS WITHIN GROUPS B AND S-2 ARE NOT REQUIRED TO BE FIRE RATED.

THE REQUIRED CAPACITY OF CORRIDORS SHALL BE DETERMINED AS SPECIFIED IN SECTION 1005.1 BUT THE MINIMUM WIDTH SHALL NOT BE LESS THAN 44 INCHES.

CODE ANALYSIS - SUMMARY

PROJECT	APPLICABLE CODES		SIZE	
MARION STREET STATION	PENNSYLVANIA UNIFORM CONSTRUCTION CODE	2015	TOTAL BUILDING:	15,903 GSF
READING FIRE DEPARTMENT	INTERNATIONAL BUILDING CODE	2015		
	INTERNATIONAL MECHANICAL CODE	2015	FIRST FLOOR:	7,100 GSF
1201 N. 9TH STREET	NATIONAL ELECTRIC CODE		MEZZANINE:	1,603 NSF
CITY OF READING	NATIONAL STANDARD PLUMBING CODE	2015	SECOND FLOOR:	7,200 GSF
PA., 19604	INTERNATIONAL ENERGY CODE	2015		
	INTERNATIONAL FIRE CODE	2015		
	INTERNATIONAL FUEL GAS CODE	2015		

PROJECT DESCRIPTION

THE PROJECT PROPOSES A NEW FIRE STATION AT THE EXISTING LOT ON 1201 NORTH 9TH STREET, IN THE CITY OF READING PENNSYLVANIA. THE STRUCTURE WILL BE TWO STORIES IN HEIGHT AND APPROXIMATELY 15,903 SF IN TOTAL SQUARE FOOTAGE. ON THE GROUND FLOOR APPARATUS BAYS, FIRE GEAR STORAGE, AND TURNOUT GEAR STORAGE WILL BE PROVIDED. THE MEZZANINE WILL BE USED FOR AUXILIARY STORAGE AND DEDICATED SPACE FOR MECHANICAL EQUIPMENT. THE SECOND FLOOR WILL HOUSE A KITCHEN/DAYROOM AREA, ADMINISTRATIVE SPACE AND BUNK ROOMS FOR DEPARTMENT EMPLOYEES. THE PROPOSED STRUCTURE WILL BE TYPE IIB, NON-COMBUSTIBLE CONSTRUCTION AND FULLY SPRINKLERED.

TRAVEL DISTANCE TABLE 1017.2		COMMON PATH OF EGRESS TABLE 1006.2.1		DEAD-END CORRIDORS 1020.4, EXCEPTION 2	
ALLOWED	MAX. ACTUAL	ALLOWED	MAX. ACTUAL	ALLOWED	MAX. ACTUAL
B - 300'	192' 6"	B - 100'	96 ' 4"	B - 50'	10' 3"
S-2 - 400'		S-2 - 100'		S-2 - 50'	
R2 - 250'		R2 - 125'		R2 - 50'	

OCCUPANT LOAD FACTORS

ROOM NAME	AREA SF	FACTOR	OCCUPANT LOAD	TOTAL OCCUPANTS
STORAGE USE				
LOBBY 101	207	- - -		
CREW OFFICE 102	149	100 GSF	2	
APPARATUS BAY 103	3,718	300 NSF	13	
UTILITY 104	54	- - -		
FIRE STORAGE 105	102	- - -		
SCBA 106	112	- - -		
GROUNDS STORAGE 107	97	- - -		
TOILET 108	45	- - -		
EMS STORAGE 109	50	- - -		
SHOWER 110	28	- - -		
SHOWER 111	28	- - -		
TIER II VESTIBULE 112	130	- - -		
TURNOUT GEAR 113	518	- - -		
TIER I DECON 114	143	- - -		
DAYROOM 115	194	15 NET	13	
MEZZANINE 200.1	1,195	300 NSF	4	
STORAGE 200.2/MEZZ 200.3	430		2	
				34
VERTICAL CIRCULATION				
STAIR 01	- - -	- - -		
STAIR 02	- - -	- - -		
STAIR 03	- - -	- - -		
STAIR 04 ROOF ACCESS	- - -	- - -		
ELEVATOR	- - -	- - -		
POLE 210	- - -	- - -		
POLE 219	- - -	- - -		
BUSINESS USE				
		100 GROSS (U.N.O)		
CORRIDOR 201	241			
STUDY 202	189			
KITCHEN 204	805			
JAN 205	13			
BATTALION OFFICE 224	138			
CORRIDOR 225	203		17	
CONFERENCE 226	216	15 NET	15	
IT 227	33			
TOILET 228	48		1	
DAYROOM 203	571	15 NET	38	
FITNESS 230	398	50 GROSS	8	
COURTYARD 218	728	15 NET	49	
				128
RESIDENTIAL USE				
		200 GROSS (U.N.O)		
CORRIDOR 207	173			
CORRIDOR 211	413			
T&S 206	80			
T&S 208	80			
T&S 209	80			
LAUNDRY/JAN 220	63			
T&S 223	105		5	
BUNK 212	120	50 GROSS		
BUNK 213	117			
BUNK 214	117			
BUNK 215	117			
BUNK 216	117			
BUNK 217	111			
BUNK 222	86		16	
				21
TOTAL SECOND FLOOR				149
GRAND TOTAL				**183**

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SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

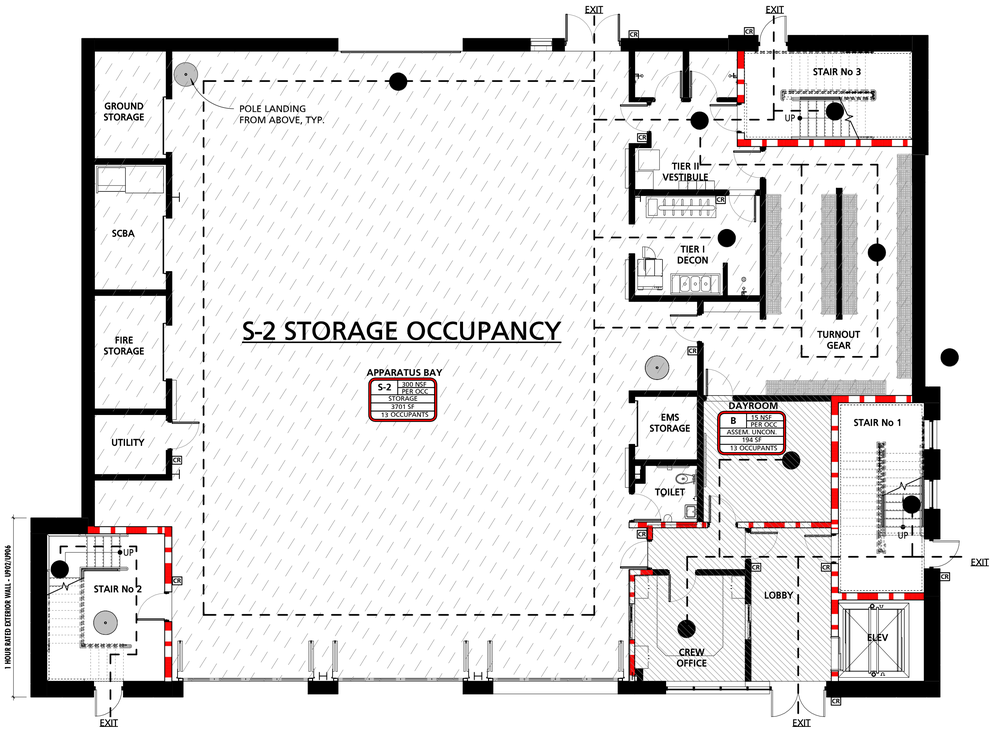
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

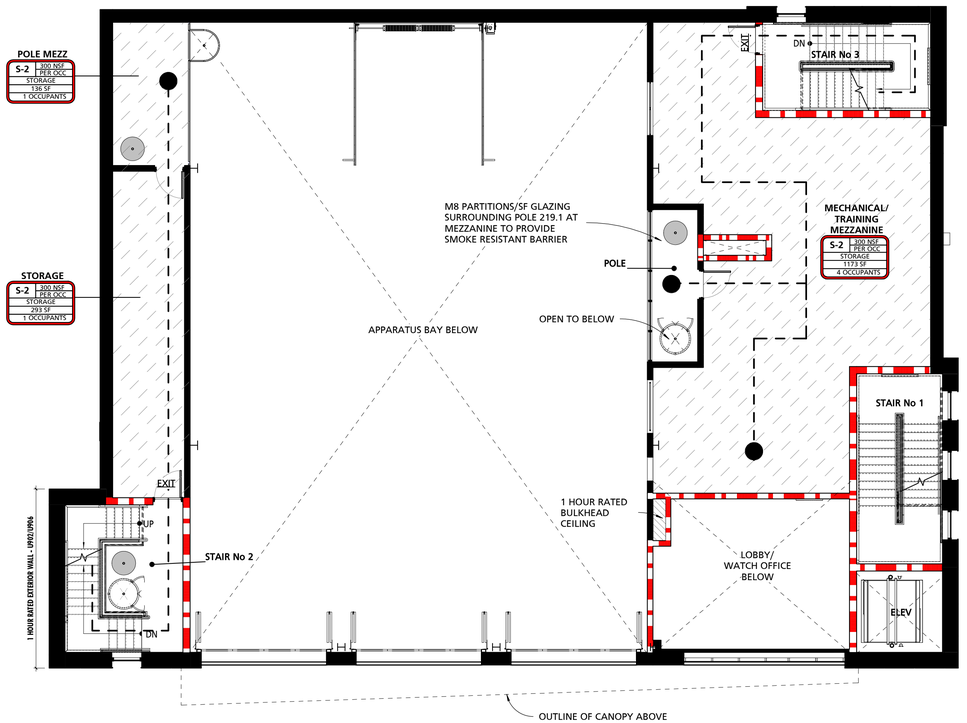
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: CODE ANALYSIS
SHEET NUMBER: G002

7/20/2021 11:46:01 AM



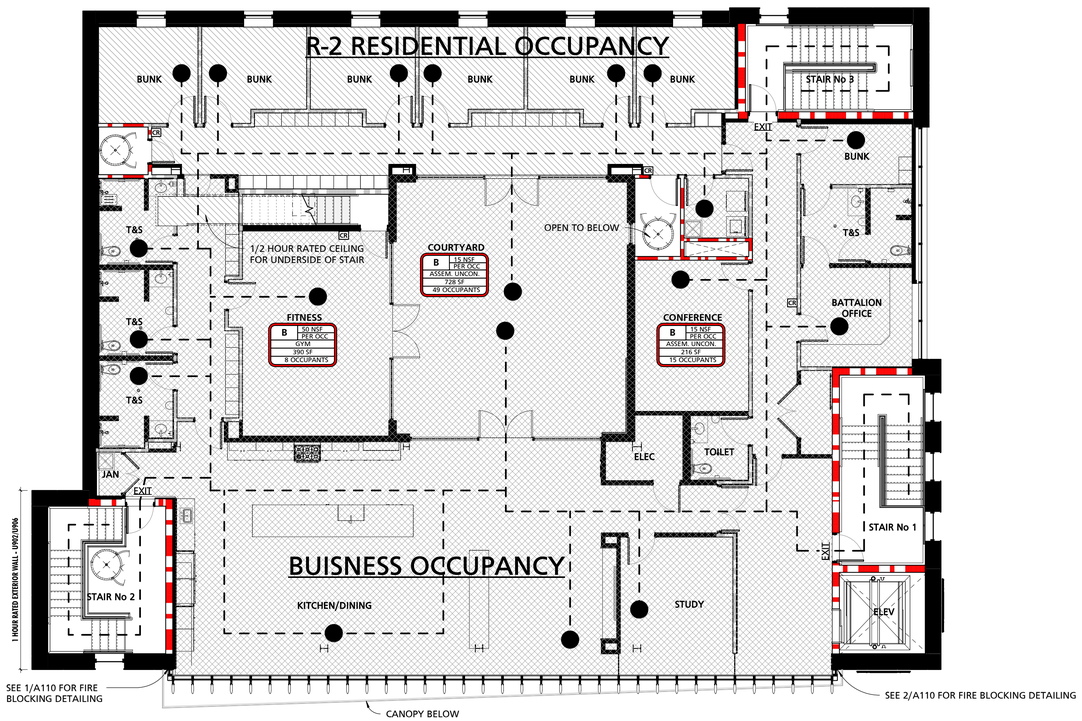
1 FIRST FLOOR CODE DIAGRAM

1/8" = 1'-0"



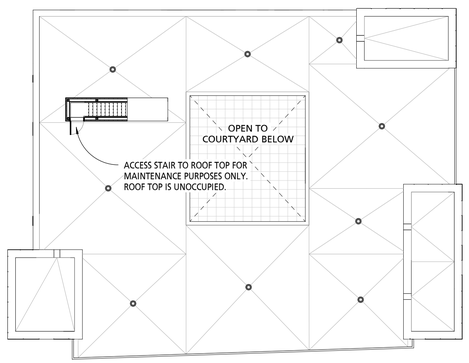
2 MEZZANINE CODE DIAGRAM

1/8" = 1'-0"



3 SECOND FLOOR CODE DIAGRAM

1/8" = 1'-0"



4 ROOF PLAN (UNOCCUPIED)

1/16" = 1'-0"

	S-2: STORAGE
	B: BUISNESS
	R-2: RESIDENTIAL
	ILLUMINATED "EXIT" SIGN
1 HR UL#409 SMOKE PARTITION	RATED WALL TAG
FEC / FE	FEC = RECESSED FIRE EXTINGUISHER & CABINET; FE = WALL MOUNTED FIRE EXTINGUISHER
	1/2 HOUR RATED PARTITION
	1 HOUR RATED PARTITION
	2 HOUR RATED PARTITION
CR	ELECTRIC CARD READER DOOR ACCESS. FAIL SAFE.
	SEPARATION DISTANCE
A C B	A = OCCUPANTS B = ACTUAL EGRESS WIDTH C = REQUIRED EGRESS WIDTH

LEGEND - CODE PLAN LEGEND

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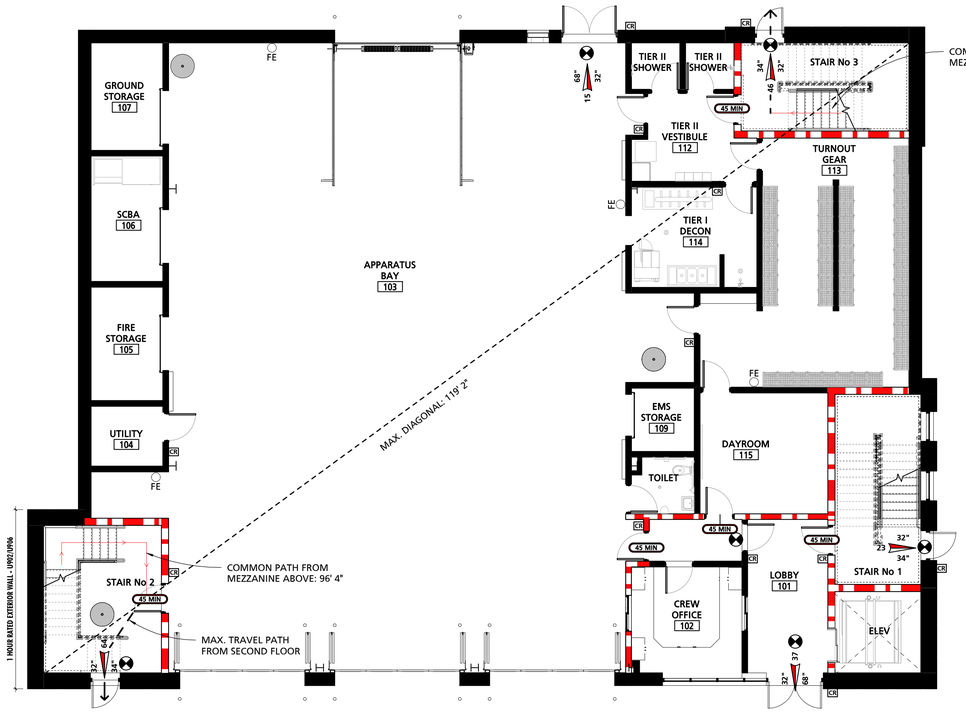
1201 N 9TH STREET, CITY OF READING, PA 19604

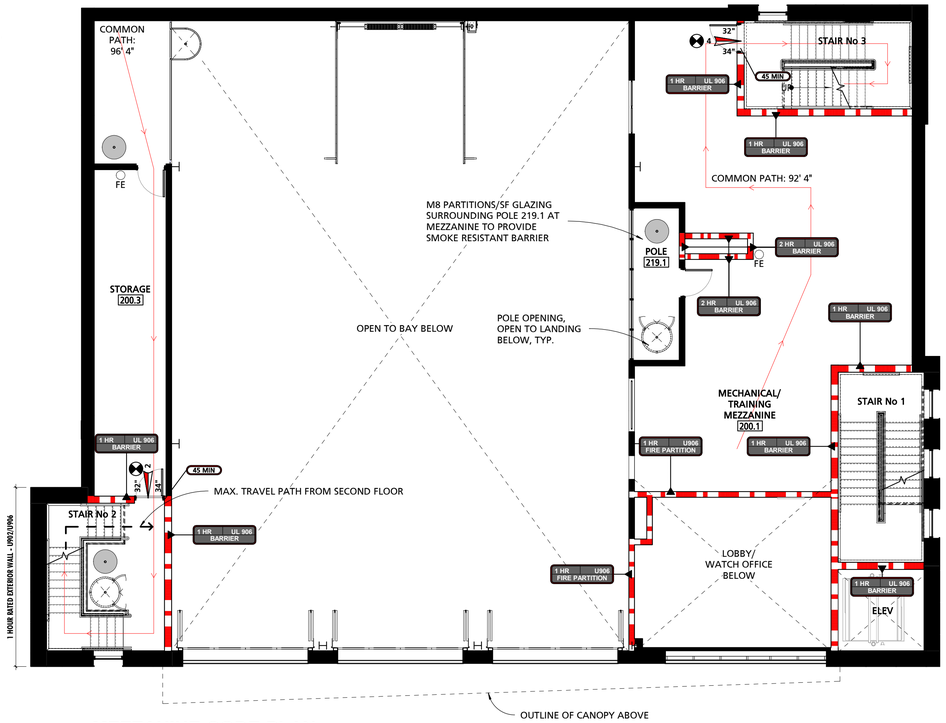
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: CODE DIAGRAMS
SHEET NUMBER: G003

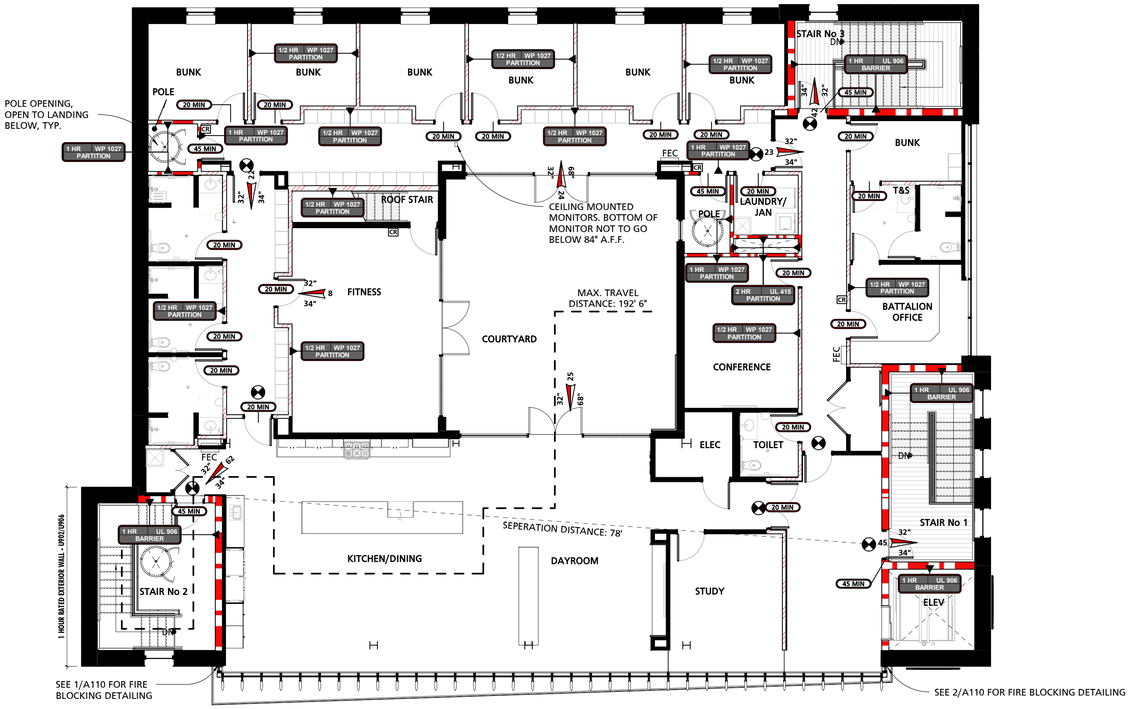
7/20/2021 11:46:11 AM



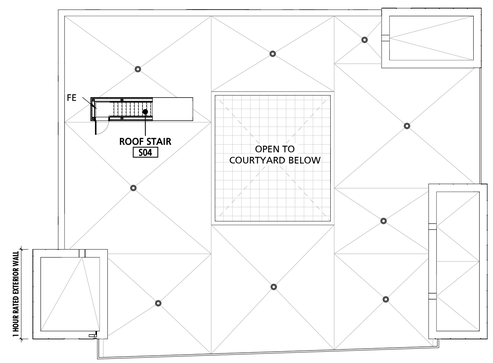
1 FIRST FLOOR CODE PLAN
1/8" = 1'-0"



2 MEZZANINE CODE PLAN
1/8" = 1'-0"



3 SECOND FLOOR CODE PLAN
1/8" = 1'-0"



4 ROOF PLAN (UNOCCUPIED)
1/16" = 1'-0"

	S-2: STORAGE
	B: BUISNESS
	R-2: RESIDENTIAL
	ILLUMINATED "EXIT" SIGN
1 HR UL 840/S SMOKE PARTITION	RATED WALL TAG
FEC / FE	FEC = RECESSED FIRE EXTINGUISHER & CABINET; FE = WALL MOUNTED FIRE EXTINGUISHER
	1/2 HOUR RATED PARTITION
	1 HOUR RATED PARTITION
	2 HOUR RATED PARTITION
CR	ELECTRIC CARD READER DOOR ACCESS. FAIL SAFE.
	SEPARATION DISTANCE
A / B / C	A = OCCUPANTS B = ACTUAL EGRESS WIDTH C = REQUIRED EGRESS WIDTH

LEGEND - CODE PLAN LEGEND

GENERAL CODE PLAN NOTES

#	NOTES
1	FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED AS REQUIRED BY IBC 703.7

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EXPIRATION DATE: 6-30-2023

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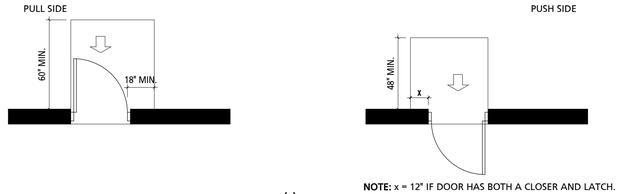
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: CODE PLAN
SHEET NUMBER: G004

7/20/2021 11:46:23 AM



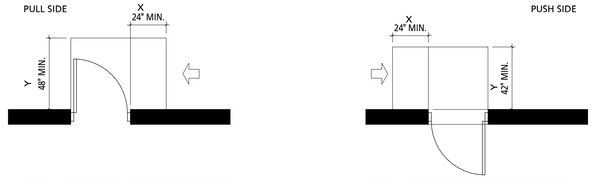
NOTE: x = 12" IF DOOR HAS BOTH A CLOSER AND LATCH.

(a)
Front Approaches - Swinging Doors

NOTE: X = 36" MIN IF Y = 60"
S = 42" MIN IF Y = 54"

NOTE: y = 48" MINIMUM IF DOOR HAS BOTH A CLOSER AND LATCH.

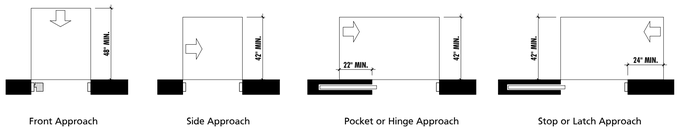
(b)
Hinge Side Approaches - Swinging Doors



NOTE: y = 54" MINIMUM IF DOOR HAS CLOSER

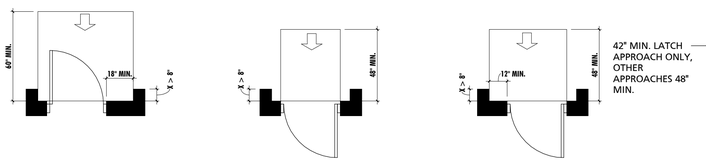
NOTE: y = 48" MINIMUM IF DOOR HAS CLOSER.

(c)
Latch Side Approaches - Swinging Doors



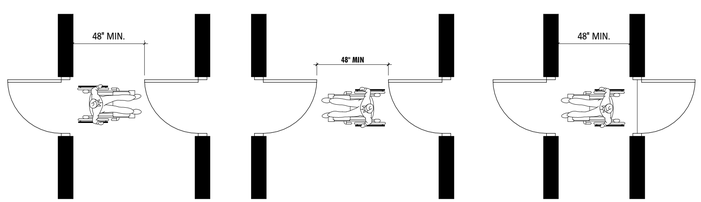
Front Approach | Side Approach | Pocket or Hinge Approach | Stop or Latch Approach

(d)
Doorways without Doors



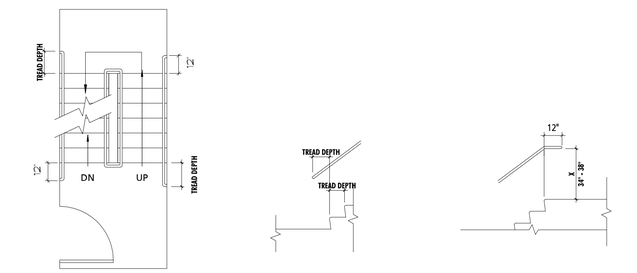
Pull Side | Push Side | Push Side with Closer and Latch

(e)
Recessed Doors and Gates



Two Hinged Doors in Series

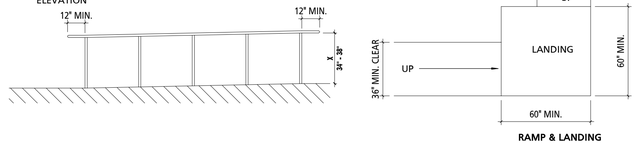
DOOR CLEARANCES (TYPICAL)
NOT TO SCALE

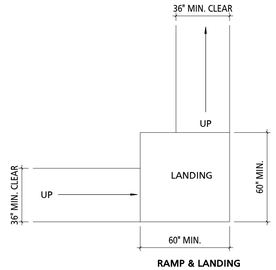


PLAN

EXTENSION AT BOTTOM OF RUN

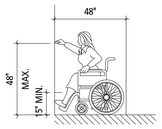
EXTENSION AT TOP OF RUN



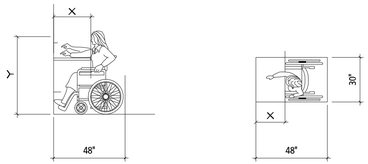


RAMP & LANDING

STAIR & RAMP CLEARANCES (TYPICAL)
NOT TO SCALE

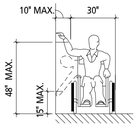


HIGH FORWARD REACH LIMIT (FRONT APPROACH)

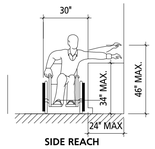


MAXIMUM FORWARD REACH OVER AN OBSTRUCTION

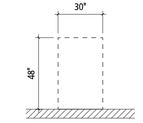
NOTE: WHEN X IS >20 INCHES MAX, Y SHALL BE 48 INCHES MAX
WHEN X IS 20-25 INCHES MAX, Y SHALL BE 44 INCHES MAX



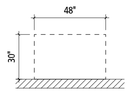
HIGH & LOW SIDE REACH LIMITS



SIDE REACH

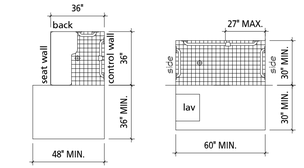


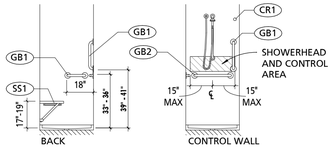
FRONT APPROACH

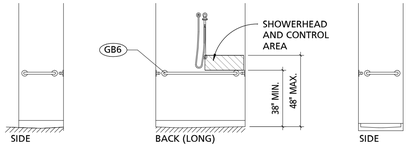


SIDE APPROACH

REACH RANGES & APPROACHES (TYPICAL)
NOT TO SCALE

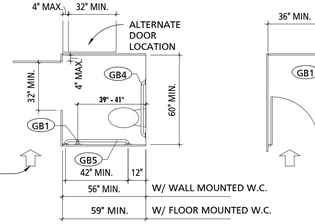




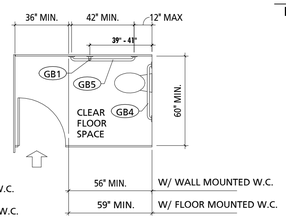


NOTE: SHOWER HEAD AND CONTROL AREA MAY BE ON BACK (LONG) WALL (AS SHOWN) OR ON EITHER SIDE WALL.

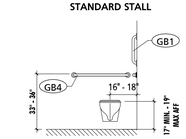
SHOWERS (TYPICAL)
NOT TO SCALE



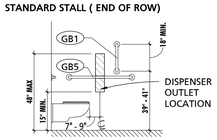
STANDARD STALL



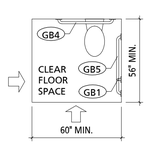
STANDARD STALL (END OF ROW)

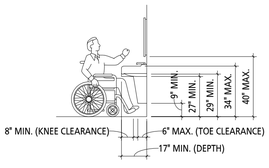


REAR WALL OF STANDARD STALL



SIDE WALLS

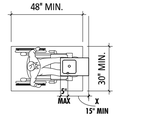




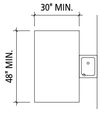
LAVATORY CLEARANCES

CLEAR FLOOR SPACE AT LAVATORIES

TOILET ROOM CLEARANCES (TYPICAL)
NOT TO SCALE

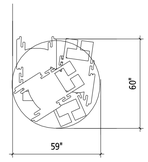


CLEAR FLOOR SPACE

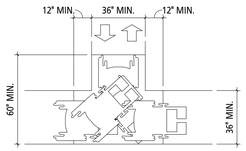


FREE STANDING FOUNTAIN OR COOLER

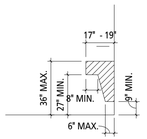
DRINKING FOUNTAINS (TYPICAL)
NOT TO SCALE



60 INCH - DIAMETER SPACE



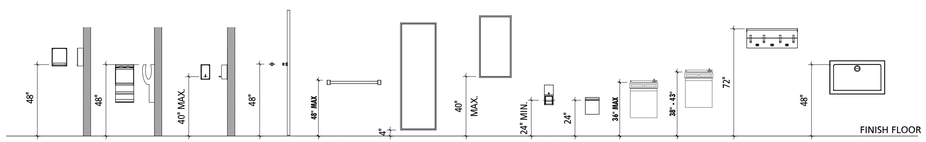
T - SHAPED SPACE FOR 180 DEGREE TURNS



ALLOWABLE PROTRUSIONS INTO WHEELCHAIR SPACE

FLOOR CLEARANCES (TYPICAL)
NOT TO SCALE

TAG	FIXTURE/ACCESSORY
GB1	GRAB BAR - 18"
GB2	GRAB BAR - 24"
GB3	GRAB BAR - 30"
GB4	GRAB BAR - 36"
GB5	GRAB BAR - 42"
GB6	GRAB BAR - 48"
CR1	SHOWER CURTAIN ROD
SS1	FOLDING SHOWER SEAT



NOTE: ALL CONTROLS SHALL NOT EXTEND ABOVE 48" FOR FRONT APPROACH & 54" FOR SIDE APPROACH. (SEE REACH RANGE DIAGRAMS.)

NOTE: NOT ALL ITEMS SHOWN MAY BE USED IN THIS BUILDING.

TYPICAL ACCESSIBLE MOUNTING HEIGHTS
NOT TO SCALE

MW STUDIOS
ARCHITECTURE + MASTER PLANNING
10839-D PHILADELPHIA RD
WHITE MARSH, MD 21162
(P) 410-344-1460
(F) 443-403-2460
(E) INFO@MWSARCH.COM
WWW.MWSARCH.COM

SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: TYPICAL ACCESSIBILITY GUIDELINES
SHEET NUMBER: G005

7/20/2021 11:46:25 AM

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS

MARION STREET STATION

READING FIRE DEPARTMENT

CITY OF READING
BERKS COUNTY, PENNSYLVANIA

FIRST CAPITAL ENGINEERING

48 South Richland Avenue
York, PA 17404
Phone (717) 845–FCAP
FAX (717) 852–7891

Gettysburg, PA 17325
Phone (717) 337–3827
www.FCAP.com

☆ CIVIL ENGINEERS ☆ MUNICIPAL ENGINEERS ☆ ENVIRONMENTAL SCIENTISTS ☆
☆ LANDSCAPE ARCHITECTS ☆ PLANNERS ☆ SURVEYORS ☆

FCE # 1476–1
DATE: 3–26–21
PROJECT MANAGER: JMD
DRAWN BY: ARB
CHECKED BY:

CITY OF READING PLANNING COMMISSION

REVIEWED BY THE CITY OF READING PLANNING COMMISSION

DATE: ____________________

____

STATEMENT OF OWNERSHIP: CITY OF READING

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF YORK

ON THIS, THE ______ DAY OF____________________, 20_____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED* ________, BEING** __________ OF*** CITY OF READING, THE **** OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF YHA, THAT THE PLAN IS THE ACT AND DEED OF YHA, THAT YHA DESIRES THE SAME TO BE RECORDED AND, ON BEHALF OF YHA, FURTHER ACKNOWLEDGES THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO THE PUBLIC USE.

CORPORATE SEAL

*****____________________

******____________________

MY COMMISSION EXPIRES ____________________,20____.

- * INDIVIDUAL'S NAME
- ** INDIVIDUAL'S TITLE
- *** YHA
- **** IDENTIFY OWNERSHIP OR EQUITABLE OWNERSHIP
- ***** SIGNATURE OF INDIVIDUAL
- ****** SIGNATURE AND SEAL OF NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ACKNOWLEDGE DEEDS

CITY OF READING STORMWATER CERTIFICATION

I, ____________________ ACKNOWLEDGE THE STORMWATER MANAGEMENT SYSTEM TO BE A PERMANENT FIXTURE THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE CITY OF READING.

____

____
TITLE

____
DATE

PA ONE CALL

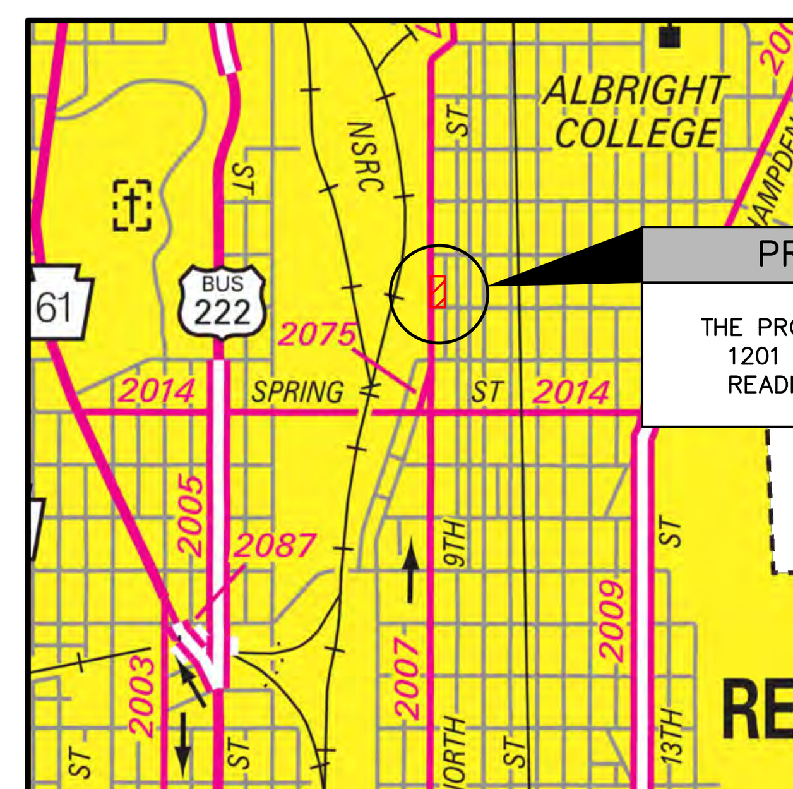
PA ONE CALL ID NUMBER FOR THIS JOB IS 20202961643. LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON RECORD DRAWINGS, AND/OR SURFACE EVIDENCE ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL CONTACT THE PA ONE CALL SYSTEM (1–800–242–1776), A MINIMUM OF 3 DAYS PRIOR TO EXCAVATION AS REQUIRED BY PA ACT 121 (OCT. 2008).

RECORDER OF DEEDS

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR CITY OF READING, PENNSYLVANIA, IN PLAN BOOK _______ , PAGE ________ , THIS _________ DAY OF ____________________ , A.D.20______ .

UTILITIES

WATER	READING AREA WATER AUTHORITY 1801 KUTZTOWN ROAD READING PA, 19604 (610) 406–6300
CABLE TV	CENTURYLINK 5095 RITTER ROAD MECHANICSBURG, PA 17055 (717) 506–1600
PHONE	CENTURYLINK 5095 RITTER ROAD MECHANICSBURG, PA 17055 (717) 506–1600
ELECTRIC	MET–ED 2800 POTTSVILLE PIKE READING, PA 19605 (800) 545–7741
GAS	UGI UTL READING 2525 NORTH 12TH STREET READING, PA 19605 (800) 276–2722
SEWER	CITY OF READING 815 WASHINGTON STREET READING, PA 19601 (877) 727–3234



PROPERTY LOCATION

THE PROPERTIES ARE LOCATED AT:
1201 N. 9TH STREET
READING, PA 19604

LOCATION MAP
SCALE: 1"= 2000'

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
CS	COVER SHEET
LD–1	GENERAL NOTES
LD–1A	CROSS SECTIONS
LD–2	OVERALL EXISTING CONDITION PLAN
LD–3	EXISTING CONDITION & DEMOLITION PLAN
LD–4	SITE PLAN
LD–5	GRADING PLAN
LD–6	UTILITY PLAN
LD–6A	LIGHTING PLAN
LD–7	PROFILES SHEET
LD–8	DETAIL SHEET
LD–9	DETAIL SHEET
LD–10	TURNING TEMPLATE
LD–11	TURNING TEMPLATE
LD–12	EXISTING PARKING EXHIBIT
LD–13	PROPOSED PARKING EXHIBIT
PCSM–1	EXISTING CONDITIONS
PCSM–2	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
PCSM–3	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

ON–SITE STORMWATER MANAGEMENT FACILITIES

1. THIS PROPERTY IS IMPROVED WITH UNDERGROUND STORMWATER MANAGEMENT FACILITIES. IN THE EVENT THAT THE PROPERTY IS TRANSFERRED TO AN OWNER OTHER THAN THE CITY OF READING, THE NEW OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE EXISTING STORMWATER MANAGEMENT FACILITIES AND SHALL ENTER INTO A MAINTENANCE AND OPERATIONS AGREEMENT WITH THE CITY OF READING

SPECIAL EXCEPTION & VARIANCE REQUESTS

1. THE FOLLOWING SPECIAL EXCEPTION AND VARIANCES WERE GRANTED BY THE CITY OF READING ZONING HEARING BOARD, APPEAL #2021–05 AT THEIR MEETING HELD ON APRIL 14, 2021.
   - A SPECIAL EXCEPTION – SECTION 600–804–B(4)(i) MUNICIPAL BUILDINGS.
   - A VARIANCE TO SECTION 600–1401, 1402, 1602N – BUFFER STRIPS/SCREENING.
   - A VARIANCE TO SECTION 600–1503–B – PRIVATE DRIVEWAYS.
   - A VARIANCE TO SECTION 600–1603–A–(10) – OFF STREET PARKING STANDARDS.
   - A VARIANCE TO SECTION 600–1604 – OFF STREET LOADING SPACES.
   - A VARIANCE TO SECTION 600–804 – MAXIMUM BUILDING COVERAGE
     - – MAXIMUM IMPERVIOUS COVERAGE
     - – MAXIMUM FRONT YARD SETBACK
     - – MAXIMUM SIDE YARD SETBACK

a. APPLICANT IS HEREBY GRANTED THE VARIANCE, SPECIAL EXCEPTION, AND ANY OTHER ASSOCIATED RELIEF SUBJECT TO THE FOLLOWING CONDITIONS:
   - i. A PRELIMINARY LAND DEVELOPMENT PLAN SHALL BE SUBMITTED ADDRESSING THE PROVISIONS REQUIRED BY THE ZONING ORDINANCE AND THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
   - ii. A FINAL LAND DEVELOPMENT PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CITY OF READING AND RECORDED WITH THE BERKS COUNTY RECORDER OF DEEDS.
   - iii. THE USE OF NORTH MILL STREET SHALL BE REVIEWED BY THE DIRECTOR OF PUBLIC WORKS IN FURTHER DETAIL TO DETERMINE THAT ALL VEHICLES CAN MAKE THE NECESSARY TURNING MOVEMENTS FOR INGRESS AND EGRESS. IF THE DIRECTOR DETERMINES IT NECESSARY, THE WIDTH OF THE ALLEY OR ROAD SHALL BE WIDENED AND IMPROVED AS PART OF THE LAND DEVELOPMENT PLAN.
   - iv. THE LAND DEVELOPMENT PLAN SHALL PROVIDE EMPHASIS ON NEIGHBORHOOD REVITALIZATION, VEHICULAR AND PEDESTRIAN SITE ACCESSIBILITY, OFF–STREET PARKING AND LOADING, STORMWATER MANAGEMENT, SANITARY SEWAGE DISPOSAL, WATER SUPPLY, UTILITIES, LANDSCAPING AND BUFFER YARD, SOLID WASTE DISPOSAL, AND OTHER SUPPLEMENTAL REQUIREMENTS.
   - v. ALL PROPOSED SIGNS SHALL BE LOCATED, DESIGNED, PERMITTED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS SPECIFIED BY THE CITY OF READING.
   - vi. A STORMWATER MANAGEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF READING IN ACCORDANCE WITH THE PROVISIONS SPECIFIED BY THE CITY OF READING AND AGENCIES WITH JURISDICTION.
   - vii. ALL SANITARY SEWAGE DISPOSAL ISSUES SHALL BE RESOLVED TO THE SATISFACTION OF THE CITY OF READING, INCLUDING THE RESERVATION, PERMITTING, INSTALLATION AND CONNECTION OF THE REQUIRED SANITARY SEWAGE DISPOSAL IMPROVEMENTS.
   - viii. ALL WATER SUPPLY ISSUES SHALL BE RESOLVED TO THE SATISFACTION OF THE CITY OF READING, INCLUDING THE RESERVATION, PERMITTING, INSTALLATION AND CONNECTION OF THE REQUIRED WATER SUPPLY IMPROVEMENTS.
   - ix. THE APPROPRIATE BUILDING AND ZONING PERMITS SHALL BE PREPARED AND SUBMITTED TO ADDRESS ALL BUILDING CODE REQUIREMENTS.
   - x. THE BUILDING SHALL COMPLY WITH ALL FIRE, SAFETY AND ACCESSIBILITY REQUIREMENTS SPECIFIED BY THE CITY OF READING PRIOR TO OCCUPANCY.
   - xi. APPLICANT SHALL COMPLY WITH ALL RELEVANT BUILDING AND OCCUPANCY CODES AND ORDINANCES AS WELL AS THE PLANS AND TESTIMONY SUBMITTED BEFORE THE ZONING BOARD.
   - xii. APPLICANT MAY NOT USE, EXPAND, ALTER OR OTHERWISE USE THE SUBJECT PROPERTY INCONSISTENTLY WITH THE CONTENTS OF THIS DECISION WITHOUT MAKING APPLICATION REQUESTING FURTHER RELIEF FROM THE ZONING BOARD.
   - xiii. FAILURE TO COMPLY WITH ANY OF THESE ABOVE–REFERENCED CONDITIONS SHALL MEAN THE IMMEDIATE REVOCATION OF THE RELIEF GRANTED HEREIN.

MODIFICATION / WAIVER REQUESTS

1. THE FOLLOWING MODIFICATION / WAIVERS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE WERE GRANTED BY THE PLANNING COMMISSION OF THE CITY OF READING AT THEIR MEETING HELD ON MAY 25, 2021.

SECTION 515–304 –	SUBMISSION OF A PRELIMINARY PLAN
SECTION 515–602(C) –	CURBS
SECTION 515–602(D) –	SIDEWALKS

SITE/ZONING DATA

OWNER: CITY OF READING

PROPERTY LOCATED AT: 1201 NORTH 9TH STREET
READING, PA 19604

SOURCE OF TITLE: DEED BOOK 1571, PAGE 0566
UPI # 17531737061808

VERTICAL DATUM: NAD83

VERTICAL BENCHMARK:

100	377181.641	2478585.328	264.522	TRAV /MAGNAIL
101	376808.597	2478627.404	261.121	TRAV /MAGNAIL
102	376712.617	2478587.308	259.931	TRAV /MAGNAIL
103	377072.348	2478583.436	263.715	FLY /MAGNAIL
104	376815.832	2478757.171	262.618	FLY /MAGNAIL
106	377005.569	2478751.890	266.381	FLY /MAGNAIL

ZONE: R–3 RESIDENTIAL DISTRICT (SECTION 600–804)

MINIMUM LOT AREA:	5,500 SF. 0.126 ACRES
TOTAL PROPERTY AREA:	12,012 SF. 0.28 ACRES
MINIMUM LOT WIDTH:	30 FT.
TOTAL WIDTH:	100 FT.
SETBACK LINES:	
A. FRONT YARD:	
BUILDING	5 FT.
(W/ OVERHANG 4 FT. ENCROACHMENT INTO FRONT YARD SETBACK)	
(W/ BUILDING BUFFER/EXPANSION 4 FT. ENCROACHMENT INTO FRONT YARD SETBACK)	
B. SIDE YARD:	
BUILDING	6 FT.
C. REAR YARD:	
BUILDING	20 FT.
MAXIMUM BUILDING HEIGHT:	35 FT.
MAXIMUM BUILDING COVERAGE:	60%
PR. BUILDING COVERAGE:	7,109 SF. (OVERHANG 205 SF.) 60.9% (BUILDING COVERAGE)
PR. BUILDING COVERAGE W/ VARIANCE BUFFER:	7,563 SF. 62.96% (BUILDING COVERAGE)
MAXIMUM IMPERVIOUS AREA:	80%
EX. IMPERVIOUS AREA:	12,012 SF. 100% (ENTIRE SITE)
PR. IMPERVIOUS AREA:	10,360 SF. 86.25%
PR. IMPERVIOUS AREA W/ VARIANCE BUFFER:	10,528 SF. 87.65%
EX. OPEN SPACE:	0 SF. 0% (ENTIRE SITE)
PR. OPEN SPACE:	1,652 SF. 13.75%
PR. OPEN SPACE W/ VARIANCE BUFFER:	1,484 SF. 12.25%
REQUIRED PARKING:	
PR. PARKING:	10 SPACES (INCLUDES 1 HANDICAP SPACE)

No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

SURVEYOR'S CERTIFICATION

I, JOHN J. LUCIANI, A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE LOTS AND LANDS AS SURVEYED AND PLOTTED FOR THE OWNER.

JOHN J. LUCIANI, PROFESSIONAL LAND SURVEYOR,
PA NO. SU075169

DATE

LANDSCAPE ARCHITECT CERTIFICATION

I, JOSEPH M. GURNEY, A REGISTERED LANDSCAPE ARCHITECT, OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THIS PLAN, AS SHOWN AND DESCRIBED HEREIN, IS TRUE AND CORRECT AND THAT THE TOWNSHIP MAY RELY UPON THE ACCURACY THEREOF, AND THAT THE DESIGNER OF THE PLAN HAS BEEN TO THE SITE AND OBSERVED THE PRESENT CONDITION AND THAT THE PLAN INDICATED THE ACTUAL CONDITION OF THE SITE.

JOSEPH M. GURNEY, RLA, ASLA
REGISTERED LANDSCAPE ARCHITECT
PA. NO. LA001160E

DATE

ENGINEER'S CERTIFICATION

I, JOHN J. LUCIANI, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS LAND DEVELOPMENT PLAN WAS PREPARED USING ACCEPTED ENGINEERING METHODS AND TO THE BEST OF MY KNOWLEDGE, REPRESENTS THE EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS AS SURVEYED AND PLOTTED UNDER MY DIRECTION FOR THE OWNERS OR AGENTS.

JOHN J. LUCIANI, PROFESSIONAL ENGINEER, PA NO. PE–36714–E

DATE

GENERAL NOTES

1. THE PURPOSE OF THE PRELIMINARY/FINAL LAND DEVELOPMENT PLAN IS THE CONSTRUCTION OF A 14,330 SQUARE FOOT FIRE STATION AT 1201 N. 9TH STREET READING. THIS WILL REPLACE THE EXISTING FIRE STATION LOCATED AT 1155 N. 9TH STREET.
2. LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON RECORD DRAWINGS, AND/OR SURFACE EVIDENCE ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL CONTACT THE PA ONE CALL SYSTEM (1-800-242-1776), A MINIMUM OF 3 DAYS PRIOR TO EXCAVATION AS REQUIRED BY PA ACT 287 OF 1974, AS AMENDED.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS GIVEN ON THESE DRAWINGS, STANDARD STATE SPECIFICATIONS, AND LOCAL MUNICIPAL AUTHORITY CONSTRUCTION AND MATERIAL SPECIFICATIONS.
4. DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT FROM THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
5. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS, THE FIGURED DIMENSION SHALL BE USED.
6. BEARINGS AND COORDINATES AS SHOWN HEREON ARE BASED ON THE COMMONWEALTH OF PENNSYLVANIA SYSTEM OF PLANE COORDINATES, (SOUTH REGION), 1983 NORTH AMERICAN DATUM. NOVEMBER 2, 2020.
7. ELEVATIONS AS SHOWN ARE BASED ON GPS OBSERVATIONS ON PT#101 MAG NAIL SET IN ASPHALT @ SOUTHEAST CORNER OF 9TH AND MARION STREETS, ELEVATION 261.12 NAVD 1988.

   SITE BM1 FLANGE BOLT "X-CUT" ON FIRE HYDRANT, NORTHEAST CORNER OF 9TH AND MARION STREETS, ELEVATION 261.49

   SITE BM2 FLANGE BOLT "X-CUT" ON FIRE HYDRANT, NORTHWEST CORNER OF 9TH AND MOSS STREETS, ELEVATION 264.77
8. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH BY AN EXPERT ABSTRACTOR. THE TITLE INFORMATION SHOWN HEREON WAS DERIVED FROM INFORMATION MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF THE SURVEY. A TITLE SEARCH BY OTHERS COULD REVEAL ADDITIONAL EASEMENTS AND/OR ENCUMBRANCES WHICH ARE NOT SHOWN HEREON.
9. UTILITIES AND OTHER OBSTRUCTIONS AS SHOWN HEREON HAVE BEEN LOCATED BY ACTUAL FIELD MEASUREMENTS, SUPPLEMENTED BY INFORMATION OBTAINED FROM VARIOUS AGENCIES HAVING JURISDICTION. HOWEVER, WE DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION AND MUST NOTIFY THE PA ONE CALL SYSTEM, INC. PRIOR TO CONDUCTING ANY EXCAVATING ACTIVITIES. FIRST CAPITAL ENGINEERING, INC. IS NOT LIABLE FOR ANY DAMAGE ASSOCIATED WITH EXCAVATION ACTIVITIES BY OTHERS, OR AS A RESULT OF UNDERGROUND UTILITIES NOT BEING SHOWN HEREON, OR FOUND TO BE IN DIFFERENT LOCATIONS THAN AS SHOWN HEREON.
10. A PENNDOT HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF ACT OF JUNE 1, 1945 (P.L. 1242, NO. 428), KNOWN AS THE "STATE HIGHWAY LAW", BEFORE DRIVEWAY ACCESS TO A STATE HIGHWAY IS PERMITTED ACCESS TO THE STATE HIGHWAY SHALL BE AUTHORIZED BY A HIGHWAY OCCUPANCY PERMIT AND APPROVAL OF THIS PLAN DOES NOT IMPLY THAT A PERMIT CAN BE ACQUIRED.
11. THE SURVEYED PREMISES AS SHOWN HEREON IS LOCATED WITHIN THE FOLLOWING FLOOD HAZARD AREAS AS DESIGNATED AND SHOWN ON FEMA FLOOD INSURANCE RATE MAP 42011C0506G, EFFECTIVE DATE JULY 3, 2012.
12. ALL PROPOSED SIGNAGE SHALL COMPLY WITH PROVISIONS SPECIFIED BY THE CITY OF READING.
13. ALL REQUIRED SITE IMPROVEMENTS, ROAD MODIFICATIONS, STORMWATER MANAGEMENT FACILITIES AND UTILITY CONNECTIONS SHALL BE LOCATED, DESIGNED, PERMITTED, CONSTRUCTED, AND INSPECTED IN ACCORDANCE WITH THE PROVISIONS SPECIFIED BY THE CITY OF READING.
14. APPLICANT SHALL OBTAIN ALL NECESSARY ZONING AND BUILDING PERMITS. APPLICATIONS SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY OF READING.
15. PADEP ISSUED A NO PLANNING NEEDED FOR LAND DEVELOPMENT LETTER FOR THIS PROJECT DATED FEBRUARY 25, 2021. THE PROJECT DOES NOT MEET THE DEFINITION OF A SUBDIVISION UNDER THE PENNSYLVANIA SEWAGE FACILITIES ACT, SECTION 71.1 DEFINITIONS, SUBDIVISION – THE DIVISION OR REDIVISION OF A LOT, TRACT OR OTHER PARCEL OF LAND INTO TWO OR MORE LOTS, TRACTS, PARCELS OR OTHER DIVISIONS OF LAND, INCLUDING CHANGES TO EXISTING LOT LINES. THE ENUMERATING OF LOTS SHALL INCLUDE AS A LOT THAT PORTION OF THE ORIGINAL TRACT OR TRACTS REMAINING AFTER OTHER LOTS HAVE BEEN SUBDIVIDED THEREFROM

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
2. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER AND CONSTRUCTION MANAGER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
3. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE AND DO NOT INCLUDE MECHANICAL, ELECTRICAL AND MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
4. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF NEW CONSTRUCTION SHALL BE RAZED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET, ARCHITECTURAL PLANS AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, WALLS, AND FOOTINGS.
5. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
6. ALL UTILITY REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
7. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
8. UTILITY CONTACTS ARE LISTED ON THE COVER SHEET.
9. EROSION AND SEDIMENTATION CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE INSTALLED PRIOR TO INITIATION OF DEMOLITION ACTIVITIES. REFER TO E&S PLAN FOR DETAILS.
10. ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
11. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING CONSTRUCTION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO COST TO THE OWNER.
12. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS WHEN OPERATING DEMOLITION EQUIPMENT AROUND UTILITIES.
13. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH PENNDOT STANDARDS, AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION ACTIVITIES.
14. CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION ACTIVITIES.
15. DEMOLITION CONTRACTOR SHALL COORDINATE EXISTING FACILITIES UTILITY DISCONNECTS WITH THE CONSTRUCTION REPRESENTATIVE A MINIMUM 7 DAYS PRIOR TO ANTICIPATED DEMOLITION OF STRUCTURES.

LAYOUT NOTES

1. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT LOCATION OF UTILITY ENTRANCES, BUILDING DIMENSIONS, ROOF LEADERS, EXIT DOORS, EXIT RAMPS AND PORCHES. REFER TO BUILDING PLANS FOR BUILDING SIDEWALK AND SEATING LAYOUT.
2. ALL DIMENSIONS ARE TO BUILDING FACE, FACE OF CURB OR EDGE OF SIDEWALK UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR THE INSTALLATION OF TRAFFIC SIGNAGE AND PAVEMENT MARKINGS AS SHOWN ON THE CONSTRUCTION PLANS AND TRAFFIC SIGNAL PLAN.
4. ALL STRIPING SHALL BE 4" WIDE THERMOPLASTIC UNLESS NOTED OTHERWISE.
5. ALL CURB RADIUSES ARE 5' UNLESS OTHERWISE NOTED.

GENERAL CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF PROJECT, CONTRACTOR SHALL COORDINATE CONSTRUCTION SCHEDULE OF PROPOSED IMPROVEMENTS WITH THE OWNER, PROJECT ENGINEER, MUNICIPALITY, CONSTRUCTION MANAGER AND ALL ADJOINING PROPERTY OWNERS THAT WILL BE AFFECTED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL ADHERE TO THE SEQUENCE OF CONSTRUCTION OUTLINED IN THE EROSION CONTROL PLAN, UNLESS APPROVED OTHERWISE BY THE LOCAL CONSERVATION DISTRICT, THE MUNICIPALITY, AND THE PROJECT ENGINEER.
2. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WITHIN THE PROJECT LIMITS PRIOR TO THE START OF CONSTRUCTION. CONCERNS AND DISCREPANCIES REGARDING LOCATION OF SUCH FACILITIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IMMEDIATELY.
3. AT LEAST 48 HOURS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES ON ANY STORMWATER MANAGEMENT FACILITIES, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER.
4. CONTRACTOR SHALL NOT INTERRUPT EXISTING UTILITY SERVICES WITHOUT PRIOR APPROVAL FROM THE UTILITY PROVIDER. ALL AFFECTED USERS OF THE UTILITY SCHEDULED TO BE INTERRUPTED SHALL BE NOTIFIED IN A TIMELY MANNER, AS REQUIRED.
5. ALL UTILITIES SHALL BE CLEARED BY A MINIMUM OF ONE FOOT (1') UNLESS OTHERWISE NOTED. UTILITY POLES SHALL BE CLEARED BY A MINIMUM OF TWO FEET (2').
6. UNLESS NOTED OTHERWISE HEREIN, MISCELLANEOUS SIGNS, MAILBOXES, FENCES, ETC. LOCATED WITHIN CONSTRUCTION AREAS SHALL BE REMOVED AND RELOCATED BY THE CONTRACTOR, AS REQUIRED.
7. CONTRACTOR SHALL NOTE THAT, IN CASE OF DISCREPANCIES BETWEEN SCALED AND LABELED DIMENSIONS SHOWN ON THESE PLANS, THE LABELED DIMENSIONS SHALL TAKE PRECEDENCE. UNLESS NOTED OTHERWISE, IN CASE OF CONFLICTS BETWEEN THE PLANS AND DETAILS SHOWN HEREIN AND CITY ORDINANCES OR CONSTRUCTION SPECIFICATIONS, THE CITY REQUIREMENTS SHALL TAKE PRECEDENCE.
8. EXISTING BITUMINOUS OR CONCRETE PAVED AREAS OR LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED WITH MATERIAL EQUAL TO OR EXCEEDING THAT WHICH WAS DISTURBED, OR AS SPECIFIED BY THE OWNER, PROJECT OR MUNICIPAL ENGINEER, AS APPLICABLE.
9. IN FILL AREAS, COMPACTION SHALL BE TO FULL HEIGHT TO THE SPECIFIED ELEVATION. FILL SHALL BE PLACED IN EIGHT INCH (8") (PLUS OR MINUS TWO INCHES (2")) MEASURED LOOSE LIFTS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM NINETY-FIVE (95%) OF STANDARD DENSITY AS DETERMINED BY AASHTO METHODS T-99, UNLESS SPECIFIED OTHERWISE BY PROJECT OR GEOTECHNICAL ENGINEER, OR MUNICIPALITY. SITE CONTRACTOR SHALL COMPLETE ALL GRADING, FILL AND COMPACTION OPERATIONS IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL REQUIREMENTS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL, AS APPLICABLE. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY ROAD CLOSING WITH THE MUNICIPALITY AND/OR PADOT.
11. CONTRACTOR SHALL MONITOR CONSTRUCTION VEHICLES AS REQUIRED TO AVOID TRACKING MUD AND DEBRIS ONTO ANY PAVED STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE STREET(S) AND/OR ACCESS DRIVE(S) CLEARED AND THE SITE IN AN APPROPRIATE WORKMAN-LIKE MANNER.
12. ALL EXISTING LAWN AREAS DISTURBED BY PROPOSED CONSTRUCTION SHALL BE RESTORED TO PROVIDE A MINIMUM SIX INCHES (6") TOPSOIL, GRADED TO SMOOTH, TRUE LINES AND SEEDED AND MULCHED PER SPECIFICATIONS HEREIN.
13. ANY LAND AREA THAT CANNOT BE ADEQUATELY STABILIZED W/SEEDING AND MULCHING SHALL BE STABILIZED WITH GROUND STABILIZATION MATTING.
14. PROPOSED STORMWATER MANAGEMENT FACILITIES:

    PROPOSED STORMWATER DETENTION BASIN HAS BEEN DESIGNED TO MANAGE POST DEVELOPMENT STORM RUNOFF FROM PROPOSED IMPERVIOUS ROOF AND DRIVEWAY AREAS SHOWN ON THIS PLAN. NO PROVISIONS HAVE BEEN MADE TO MANAGE STORMWATER RUNOFF FROM ADDITIONAL FUTURE IMPERVIOUS AREAS NOT SHOWN ON THIS PLAN.
15. A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18") SHALL BE MAINTAINED BETWEEN ALL WATER AND SANITARY SEWER CROSSINGS. IF THIS CLEARANCE CANNOT BE MAINTAINED, A CONCRETE ENCASEMENT SHALL BE PROVIDED, UPON APPROVAL BY MUNICIPALITY AND PROJECT ENGINEER.
16. THE OWNER SHALL NOT CONSTRUCT, PLANT, OR MAINTAIN ANY STRUCTURES, FENCES, TREES, SHRUBBERY, STORMWATER MANAGEMENT FACILITIES, ETC. WITHIN THE SANITARY SEWER SYSTEM RIGHT-OF-WAYS, IN ORDER TO ENSURE A FREE AND CLEAR ACCESS TO ALL LINES. BITUMINOUS PAVING INSTALLATION OF UTILITIES OR A CHANGE IN GROUND CONTOURS WITHIN THE EASEMENT WILL BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE CITY.

STORMWATER MANAGEMENT NOTES

1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS PREPARED BY FIRST CAPITAL ENGINEERING, INC., THE CURRENT REQUIREMENTS OF THE CITY OF READING, THE APPLICABLE SECTIONS OF THE PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
2. THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-54), FEDERAL REGISTER, CHAPTER XVII, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
4. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY PA ONE CALL AT 1-800-242-1776. THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
5. CONTRACTOR TO PROVIDE SHOP DRAWINGS ON ALL STORM SEWER MANHOLES AND INLETS FOR REVIEW AND APPROVAL.
6. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
7. ALL STORM PIPE SHALL BE AS NOTED. ALL JOINTS SHALL BE WATERTIGHT.
8. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
9. ALL MANHOLES, INLETS, HEADWALLS AND ENDWALLS SHALL CONFORM TO THE REQUIREMENTS OF THE PennDOT PUBLICATION 408, AS MODIFIED BY THE ADOPTED CITY STANDARDS.
10. ALL DOWNSPOUTS SHALL BE DIRECTED TO THE PROPOSED SUBSURFACE INFILTRATION BED EITHER BY DIRECT CONNECTION OR BY CONNECTION TO THE PROPOSED STORM SEWER SYSTEM LEADING TO THE SUBSURFACE FACILITY.

STORMWATER BMP INSPECTION & MAINTENANCE SCHEDULE

ALL WASTES AND MATERIALS DEPOSITED IN AND REMOVED FROM POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BMP FACILITIES AND FROM IMPERVIOUS AREAS (EX. SWEEPING OF STREETS & PARKING LOTS) DURING OPERATION AND MAINTENANCE SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET.SEQ., 271.1., AND 287.1 ET. SEQ. NO WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

STORMTECH SUBSURFACE BASIN

CONSTRUCTION:

1. EXCAVATE THE BED AND PREPARE THE SUBGRADE. TRACKED EQUIPMENT SHOULD BE USED WHENEVER CONSTRUCTION TRAFFIC MUST OCCUR WITHIN THE BASIN FOOTPRINT. MAKE EVERY EFFORT TO WORK FROM OUTSIDE THE BASIN FOOTPRINT IN ORDER TO PREVENT COMPACTION.
2. PLACE NON-WOVEN GEOTEXTILE OVER PREPARED SOIL AND UP EXCAVATION WALLS.
3. PLACE CLEAN, CRUSHED, ANGULAR STONE FOUNDATION 9" THICK. COMPACT TO ACHIEVE A FLAT SURFACE.
4. INSTALL MANIFOLDS AND LAY OUT WOVEN SCOUR GEOTEXTILE AT INLET ROWS AT EACH INLET END CAP. PLACE A CONTINUOUS PIECE ALONG ENTIRE LENGTH OF ISOLATOR ROWS.
5. ALIGN THE FIRST CHAMBER AND END CAP OF EACH ROW WITH INLET PIPES.
6. CONTINUE INSTALLING CHAMBERS BY OVERLAPPING CHAMBER END CORRUGATIONS. CHAMBER JOINTS ARE LABELED "LOWER JOINT-OVERLAP HERE" AND "BUILD THIS DIRECTION – UPPER JOINT" BE SURE THAT THE CHAMBER PLACEMENT DOES NOT EXCEED THE REACH OF THE CONSTRUCTION EQUIPMENT USED TO PLACE THE STONE. MAINTAIN 9" SPACING BETWEEN ROWS.
7. LIFT THE END OF THE CHAMBER OFF THE GROUND TO PLACE THE END CAPS UNDER THE CHAMBER'S END CORRUGATION.
8. PLACE TWO CONTINUOUS LAYERS OF WOVEN FABRIC BETWEEN THE FOUNDATION STONE AND THE ISOLATOR ROW CHAMBERS, MAKING SURE THE FABRIC LAYS FLAT AND EXTENDS THE ENTIRE WIDTH OF THE CHAMBER FEET. DRAPE A STRIP OF NON-WOVEN GEOTEXTILE OVER THE ROW CHAMBERS.
9. INITIAL EMBEDMENT SHALL BE SPOTTED ALONG THE CENTERLINE OF THE CHAMBER EVENLY ANCHORING THE LOWER PORTION OF THE CHAMBER. THIS IS BEST ACCOMPLISHED WITH A STONE CONVEYOR OF EXCAVATOR REACHING ALONG THE ROW.
10. NO EQUIPMENT SHALL BE OPERATED ON THE BED WHILE CHAMBERS ARE BEING BACKFILLED.
11. INSTALL NON-WOVEN GEOTEXTILE OVER THE STONE. GEOTEXTILE MUST OVERLAP 24" MIN. WHERE EDGES MEET. COMPACT EACH LIFT OF BACKFILL AS SPECIFIED.

OPERATION AND MAINTENANCE:

1. A VISUAL INSPECTION OF THE FOLLOWING SYSTEM COMPONENTS SHALL BE PERFORMED SEMI-ANNUALLY TO LOOK FOR VISUAL DEFICIENCIES IN THE FORM OF SEDIMENTATION AND DEBRIS:
   - 1.a. MANHOLES LOCATED BEFORE AND/OR AFTER THE STORMTANK SYSTEM
   - 1.b. INLET AND OUTLET PIPING
   - 1.c. DISCHARGE AREA
2. INSPECT THE SYSTEM WHILE IN OPERATION, MAKING SURE INLETS REMAIN OPEN AND THE SYSTEM DOESN'T BACK UP.
3. IF, DURING THE SEMI-ANNUAL INSPECTION, IT IS FOUND THAT SEDIMENT HAS ACCUMULATED IN THE ISOLATOR ROW, A ROD SHOULD BE INSERTED TO DETERMINE THE DEPTH OF THE SEDIMENT.
4. IF THE SEDIMENT DEPTH EXCEEDS 3 INCHES THROUGHOUT THE LENGTH OF THE ISOLATOR ROW, CLEAN-OUT SHOULD BE PERFORMED.
5. MAINTENANCE SHOULD BE PERFORMED UTILIZING THE JETVAC PROCESS IN ACCORDANCE WITH THE MANUFACTURERS MAINTENANCE PROCEDURES:
   - 5.a. CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS. A FIXED FLOOR CLEANING NOZZLE WITH REAR FACING NOZZLE OF 45 INCHES OR MORE IS PREFERABLE. APPLY MULTIPLE PASSES OF JETVAV UNTIL BACKFLUSH WATER IS CLEAN. VACUUM MANHOLE SUMP AS REQUIRED.
   - 5.b. REPLACE ALL CAPS, LIDS AND COVERS, RECORD OBSERVATIONS AND ACTIONS.
   - 5.c. INSPECT & CLEAN CATCH BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

GRADING NOTES

1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS PREPARED BY FIRST CAPITAL ENGINEERING, INC., THE CURRENT REQUIREMENTS OF THE CITY OF READING, THE APPLICABLE SECTIONS OF THE PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
2. THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-54), FEDERAL REGISTER, CHAPTER XVII, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
4. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY PA ONE CALL AT 1-800-242-1776. THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
5. ALL EXISTING TREES, VEGETATION, PAVEMENTS, CONCRETE FOUNDATIONS, STRUCTURES AND ORGANIC TOPSOIL SHALL BE STRIPPED AND REMOVED FROM NEW CONSTRUCTION AREAS UNLESS NOTED OTHERWISE.
6. ALL SLOPES SHALL BE 2:1 (HORIZONTAL: VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
7. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
8. ALL AREAS NOT PAVED SHALL BE TOPSOILED, SEEDED, MULCHED OR LANDSCAPED UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS, SPECIFICATIONS, OR INSTRUCTED BY THE OWNER.
9. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT PREPARED BY ECS LIMITED GEOTECHNICAL CONSULTANTS, INC PRIOR TO INITIATION OF ANY EARTHWORK ACTIVITY.
10. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
11. FILL SHALL NOT CONTAIN BOULDERS OR FRACTURED ROCK OR BROKEN CONCRETE OVER ONE (1) FOOT IN LARGEST DIMENSION, OR ANY ORGANIC MATERIAL, TRASH, GARBAGE OR BROKEN ASPHALT PAVING. FILLS OF MORE THAN FIVE (5) FEET DEEP SHALL BE COMPACTED WHILE BEING PLACED BY A METHOD APPROVED BY THE CITY ENGINEER.
12. DURING GRADING OPERATIONS, MEASURES NECESSARY FOR DUST CONTROL WILL BE EXERCISED.

UTILITY NOTES

1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS PREPARED BY FIRST CAPITAL ENGINEERING, INC., THE CURRENT REQUIREMENTS OF THE CITY OF READING, THE APPLICABLE SECTIONS OF THE PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
2. THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-54), FEDERAL REGISTER, CHAPTER XVII, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
4. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY PA ONE CALL AT 1-800-242-1776. THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BID AND PERFORM ALL UTILITY WORK IN COMPLIANCE TO ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE INSTALLATION, INSPECTING, TESTING AND FINAL ACCEPTANCE OF ALL PROPOSED UTILITIES CONSTRUCTION.
7. CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY ON THE ADDITION, REMOVAL AND/OR RELOCATION OF UTILITIES AND UTILITY POLES AND THE EXTENSION OF ALL PROPOSED UTILITIES REQUIRED AS PART OF THE PROJECT.
8. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL UTILITIES ARE INSTALLED CORRECTLY TO MEET PROJECT REQUIREMENTS WHETHER PERFORMED BY THE CONTRACTOR OR NOT.
9. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
10. UTILITY COMPANIES AND CONTACTS ARE LISTED ON COVER SHEET.
11. WATER MAIN CONNECTIONS, ALL WORK, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF RAWA.
12. SANITARY SEWER CONNECTIONS, ALL WORK, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF READING SPECIFICATIONS MANUAL.
13. MANHOLES, INLETS, HEADWALLS, AND ENDWALLS SHALL CONFORM TO THE REQUIREMENTS OF THE PENNDOT PUBLICATION 408, AS MODIFIED BY THE ADOPTED CITY STANDARDS (SECTION 309.B.6).

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☆ LANDSCAPE ARCHITECTS ☆ PLANNERS ☆ SURVEYORS ☆

No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS

FOR

CITY OF READING

ON

1201 NORTH 9TH STREET

CITY OF READING BERKS COUNTY, PENNSYLVANIA

GENERAL NOTES

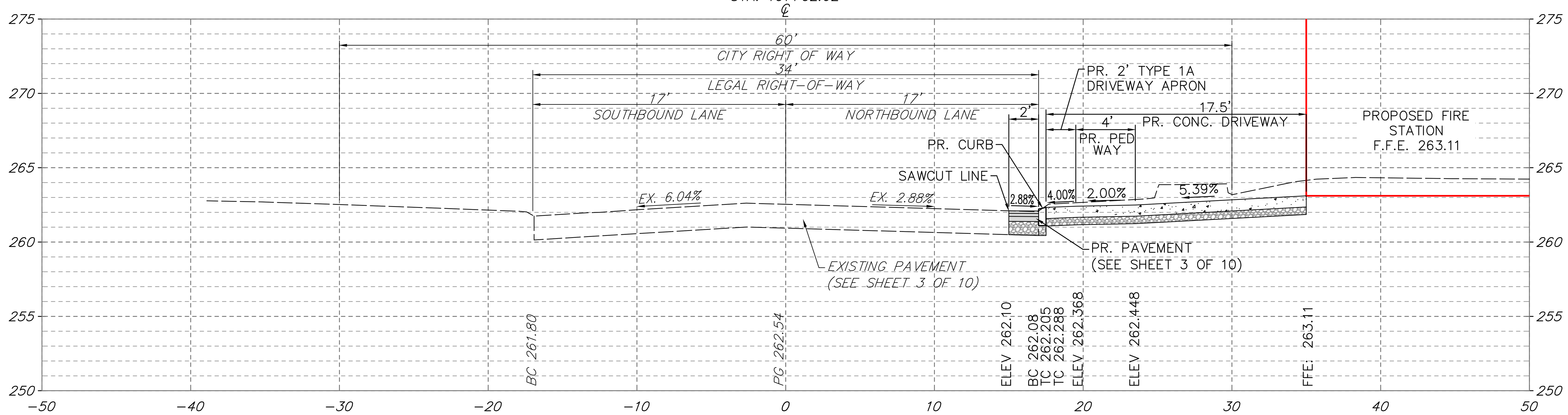
DRAWN BY:	CHECK BY:
ARB	
CADD FILE No. 1476-1 LD-NOT	
DATE: 12-3-20	JOB No.: 1476-1
SCALE: NOTED	

SHEET

LD-1

SR 2007
NORTH EDGE OF DRIVEWAY
STA. 101+28.64
℄

SR 2007
MINIMUM USE DRIVEWAY ℄
STA. 101+02.62
℄



SR 2007
SOUTH EDGE OF DRIVEWAY
STA. 100+76.64
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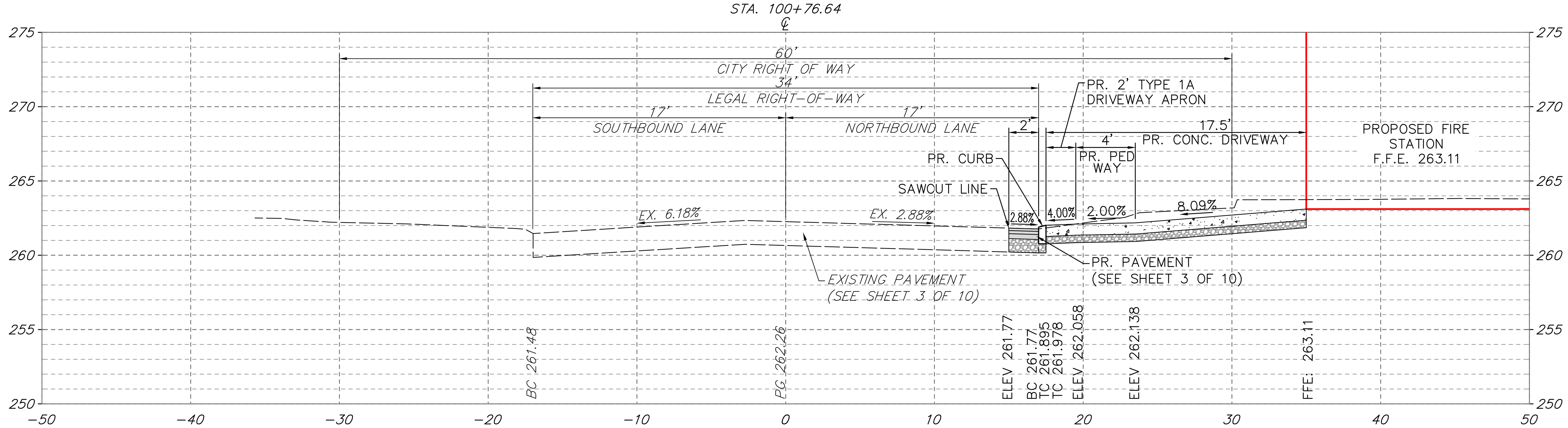

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MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

CROSS SECTIONS

DRAWN BY: ARB
CHECK BY:
CADD FILE No. 1476-1 LD-SEC SHT
DATE: 3-26-21
JOB No.: 1476-1
SCALE: 1" =5'

SHEET
LD-1A

LEGEND

- ADJOINING PROPERTY LINE
- EASEMENT LINE
- CENTER LINE
- BUILDING SETBACK LINE
- EXISTING GRADES
- EXISTING INDEX GRADES
- EXISTING CURB
- EXISTING DRAINAGE
- EXISTING OVERHEAD ELECTRIC (O/E)
- EXISTING UNDERGROUND ELECTRIC (U/E)
- EXISTING OVERHEAD TELEPHONE (O/T)
- EXISTING UNDERGROUND TELEPHONE (U/T)
- EXISTING NATURAL GAS (GAS)
- EXISTING SANITARY SEWER (SAN)
- EXISTING WATER (WAT)
- EXISTING FENCE
- EXISTING GUIDERAIL
- PROPERTY LINE
- RIGHT-OF-WAY
- ZONING BOUNDARY
- EXISTING TREE LINE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING WATER MANHOLE
- EXISTING ELECTRIC BOX
- EXISTING TELEPHONE BOX
- EXISTING CABLE BOX
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING INLET
- EXISTING LIGHT POLE
- EXISTING STREET SIGN

EXISTING SANITARY MANHOLE TABLE

ID	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. SAN. MH. 1	266.88	257.73	257.58	–	257.53	–
EX. SAN. MH. 3	261.37	251.47	–	–	251.37	–
EX. SAN. MH. 4	258.21	248.01	–	–	247.91	–
EX. SAN. MH. 5	258.36	247.36	–	–	247.21	–
EX. SAN. MH. 6	261.53	252.33	252.13	252.01	251.93	–
EX. SAN. MH. 7	262.48	254.33	253.43	–	253.43	–

EXISTING STORM STRUCTURE TABLE

ID	GRATE ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. DMH 1	266.89	260.24	259.42	–	259.29	–
EX. DMH 2	266.67	259.82	259.57	259.07	259.02	–
EX. DMH 3	263.76	256.21	256.04	–	255.91	–
EX. INLET 1	261.08	–	–	–	257.88	–
EX. INLET 2	261.38	–	–	–	257.98	–
EX. DMH 4	261.54	257.54	257.24	–	256.84	–
EX. INLET 3	260.50	–	–	–	257.30	–
EX. INLET 4	261.06	–	–	–	257.39	–
EX. DMH 5	261.35	253.25	253.20	–	253.15	–
EX. DMH 6	260.99	256.29	–	–	255.79	–
EX. DMH 7	261.65	254.65	–	–	254.55	–
EX. DMH 8	–	–	–	–	–	–

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No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING — BERKS COUNTY, PENNSYLVANIA

OVERALL EXISTING CONDITIONS PLAN

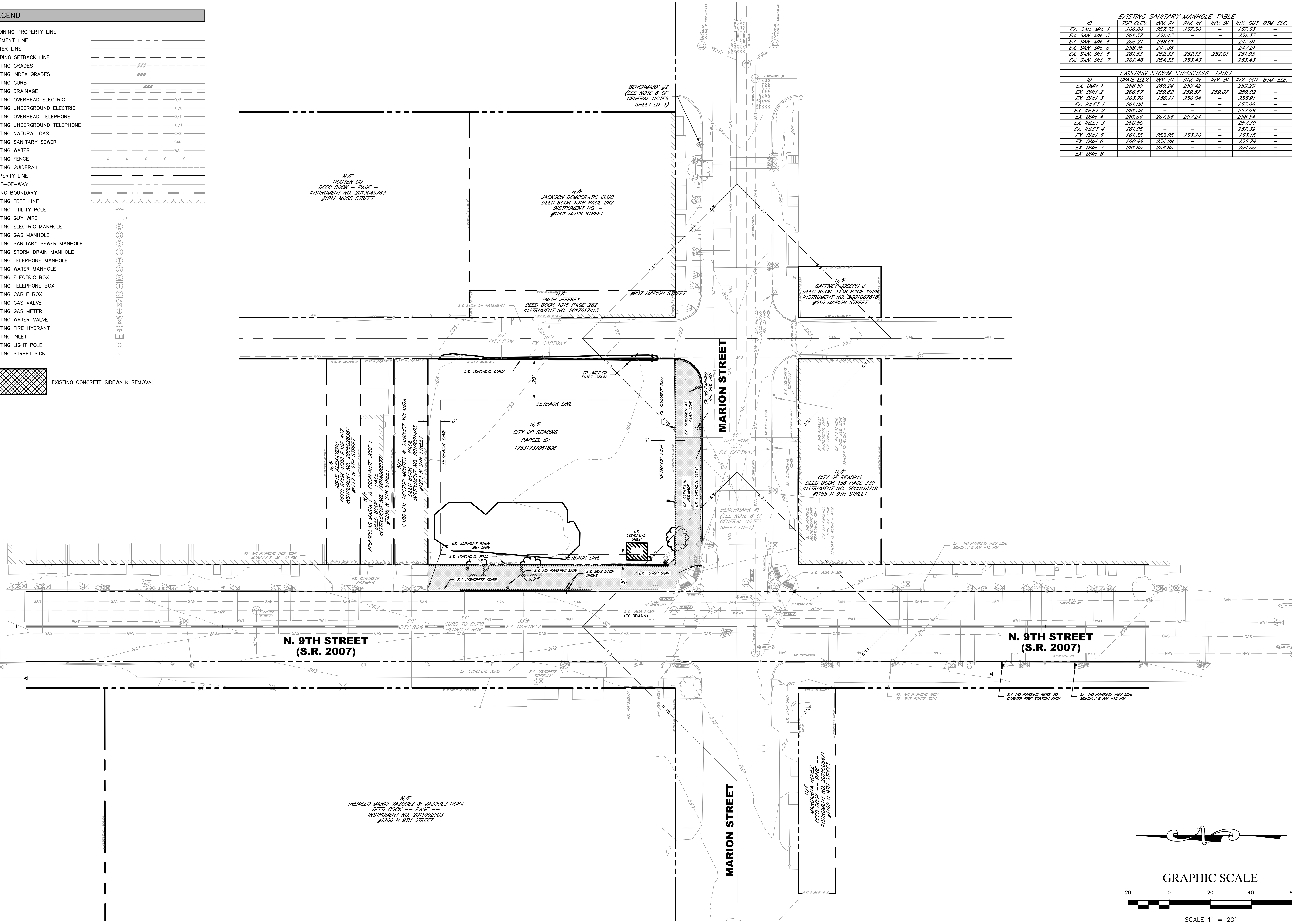
DRAWN BY:	CHECK BY:
ARB	
CADD FILE No. 1476-1 LD-EXC OVERALL	
DATE: 12-3-20	JOB No.: 1476-1
SCALE: 1"=20'	

SHEET
LD-2

LEGEND

ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING OVERHEAD ELECTRIC	O/E
EXISTING UNDERGROUND ELECTRIC	U/E
EXISTING OVERHEAD TELEPHONE	O/T
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
EXISTING FENCE	X
EXISTING GUIDERAIL	
PROPERTY LINE	
RIGHT-OF-WAY	
ZONING BOUNDARY	
EXISTING TREE LINE	
EXISTING UTILITY POLE	
EXISTING GUY WIRE	
EXISTING ELECTRIC MANHOLE	E
EXISTING GAS MANHOLE	G
EXISTING SANITARY SEWER MANHOLE	S
EXISTING STORM DRAIN MANHOLE	D
EXISTING TELEPHONE MANHOLE	T
EXISTING WATER MANHOLE	W
EXISTING ELECTRIC BOX	E
EXISTING TELEPHONE BOX	T
EXISTING CABLE BOX	C
EXISTING GAS VALVE	GV
EXISTING GAS METER	
EXISTING WATER VALVE	WV
EXISTING FIRE HYDRANT	
EXISTING INLET	
EXISTING LIGHT POLE	
EXISTING STREET SIGN	

EXISTING CONCRETE SIDEWALK REMOVAL



EXISTING SANITARY MANHOLE TABLE

ID	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. SAN. MH. 1	266.88	257.73	257.58	–	257.53	–
EX. SAN. MH. 3	261.37	251.47	–	–	251.37	–
EX. SAN. MH. 4	258.21	248.01	–	–	247.91	–
EX. SAN. MH. 5	258.36	247.36	–	–	247.21	–
EX. SAN. MH. 6	261.53	252.33	252.13	252.01	251.93	–
EX. SAN. MH. 7	262.48	254.33	253.43	–	253.43	–

EXISTING STORM STRUCTURE TABLE

ID	GRATE ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. DMH 1	266.89	260.24	259.42	–	259.29	–
EX. DMH 2	266.67	259.82	259.57	259.07	259.02	–
EX. DMH 3	263.76	256.21	256.04	–	255.91	–
EX. INLET 1	261.08	–	–	–	257.88	–
EX. INLET 2	261.38	–	–	–	257.98	–
EX. DMH 4	261.54	257.54	257.24	–	256.84	–
EX. INLET 3	260.50	–	–	–	257.30	–
EX. INLET 4	261.06	–	–	–	257.39	–
EX. DMH 5	261.35	253.25	253.20	–	253.15	–
EX. DMH 6	260.99	256.29	–	–	255.79	–
EX. DMH 7	261.65	254.65	–	–	254.55	–
EX. DMH 8	–	–	–	–	–	–

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MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS
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CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING — BERKS COUNTY, PENNSYLVANIA

OVERALL DEMOLITION PLAN

DRAWN BY: ARB	CHECK BY:
CADD FILE No. 1476-1 LD-DEMO	
DATE: 3-26-21	JOB No.: 1476-1
SCALE: 1"=20'	

SHEET LD-3

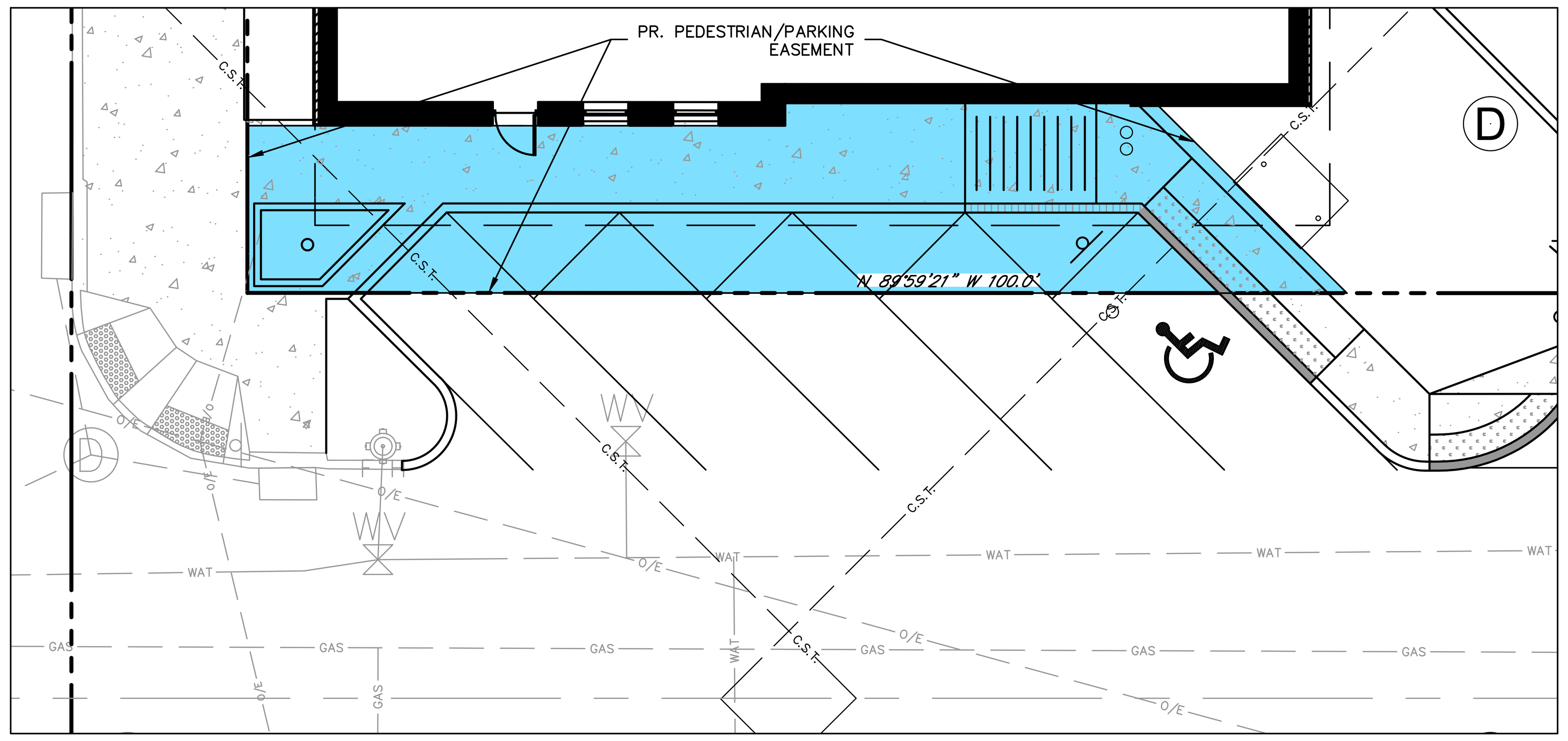
LEGEND

- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING CENTER LINE
- EXISTING BUILDING SETBACK LINE
- EXISTING CURB
- EXISTING FENCE
- PROPERTY LINE
- EXISTING RIGHT–OF–WAY
- ZONING BOUNDARY
- EXISTING STREET SIGN
- EXISTING ACCESSIBLE PARKING
- PROPOSED RIGHT–OF–WAY
- PROPOSED CURB
- PROPOSED FENCE
- PROPOSED STREET SIGN
- PROPOSED ACCESSIBLE PARKING
- PR. PEDESTRIAN/PARKING EASEMENT

GRAPHIC SCALE

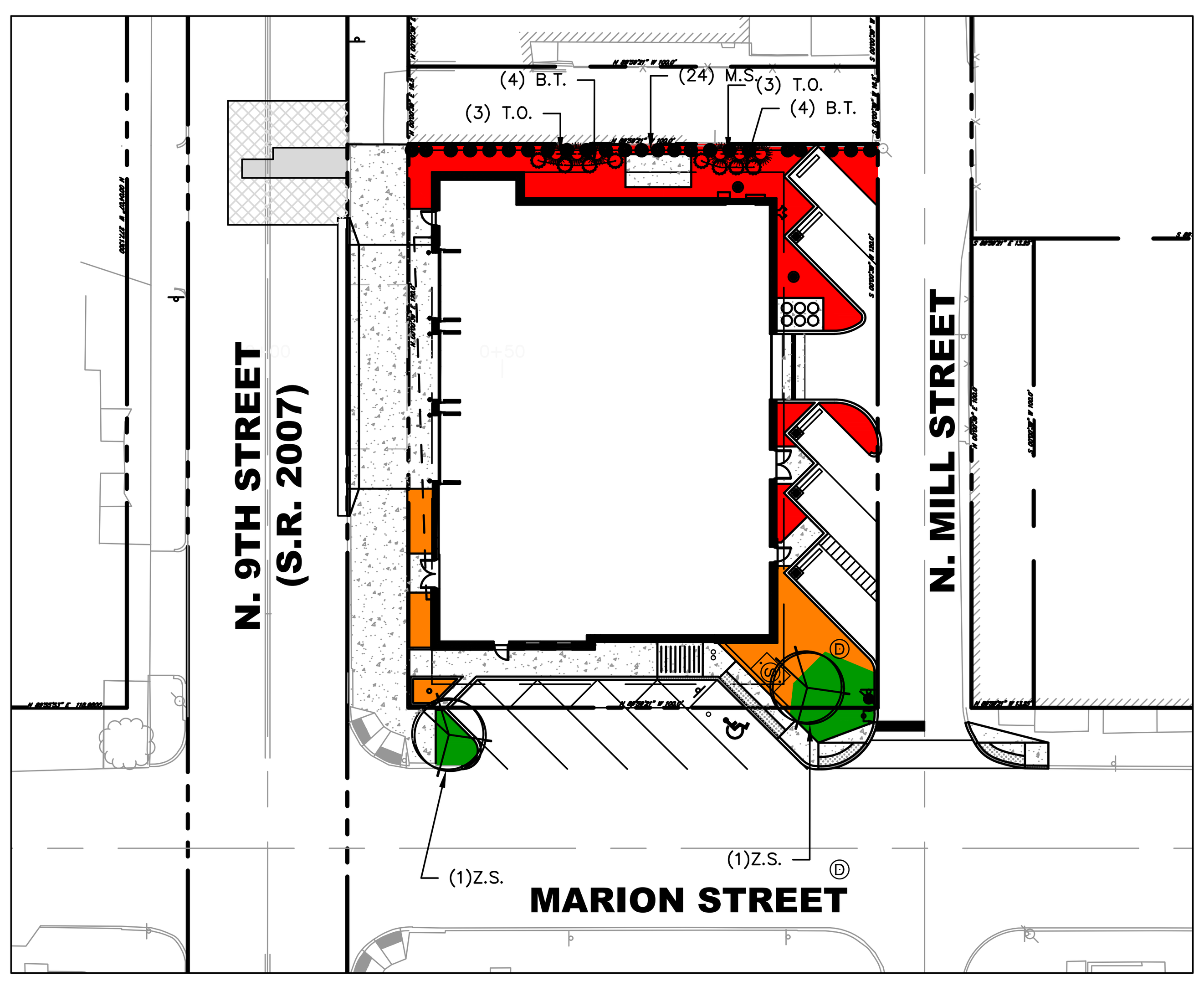
10 0 10 20 30

SCALE 1" = 10'



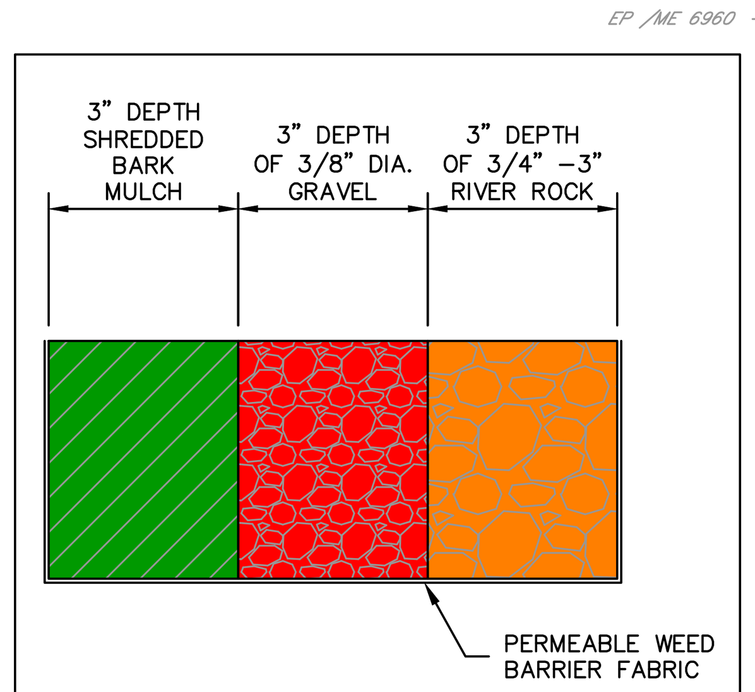
PR. PEDESTRIAN/PARKING EASEMENT

SCALE: 1" = 10'



LANDSCAPE PLAN

SCALE: 1" = 30'



PROPOSED GROUND COVER DETAIL

NOT TO SCALE

LANDSCAPE SCHEDULE

DECIDUOUS TREES

KEY	QUAN.	BOTANICAL NAME / COMMON NAME	ROOT	SIZE @ PLANTING	SIZE @ MATURITY
Z.S.	2	ZELKOVA SERRATA / JAPANESE ZELKOVA	B&B	2" CAL.(MIN.)	15' SPREAD; 20–30' HEIGHT

EVERGREEN TREES

KEY	QUAN.	BOTANICAL NAME / COMMON NAME	ROOT	SIZE @ PLANTING	SIZE @ MATURITY
T.O.	6	THUJA OCCIDENTALIS / EMERALD ARBORVITAE	B&B	2" CAL. (MIN.)	3–4' SPREAD; 10–15' HEIGHT

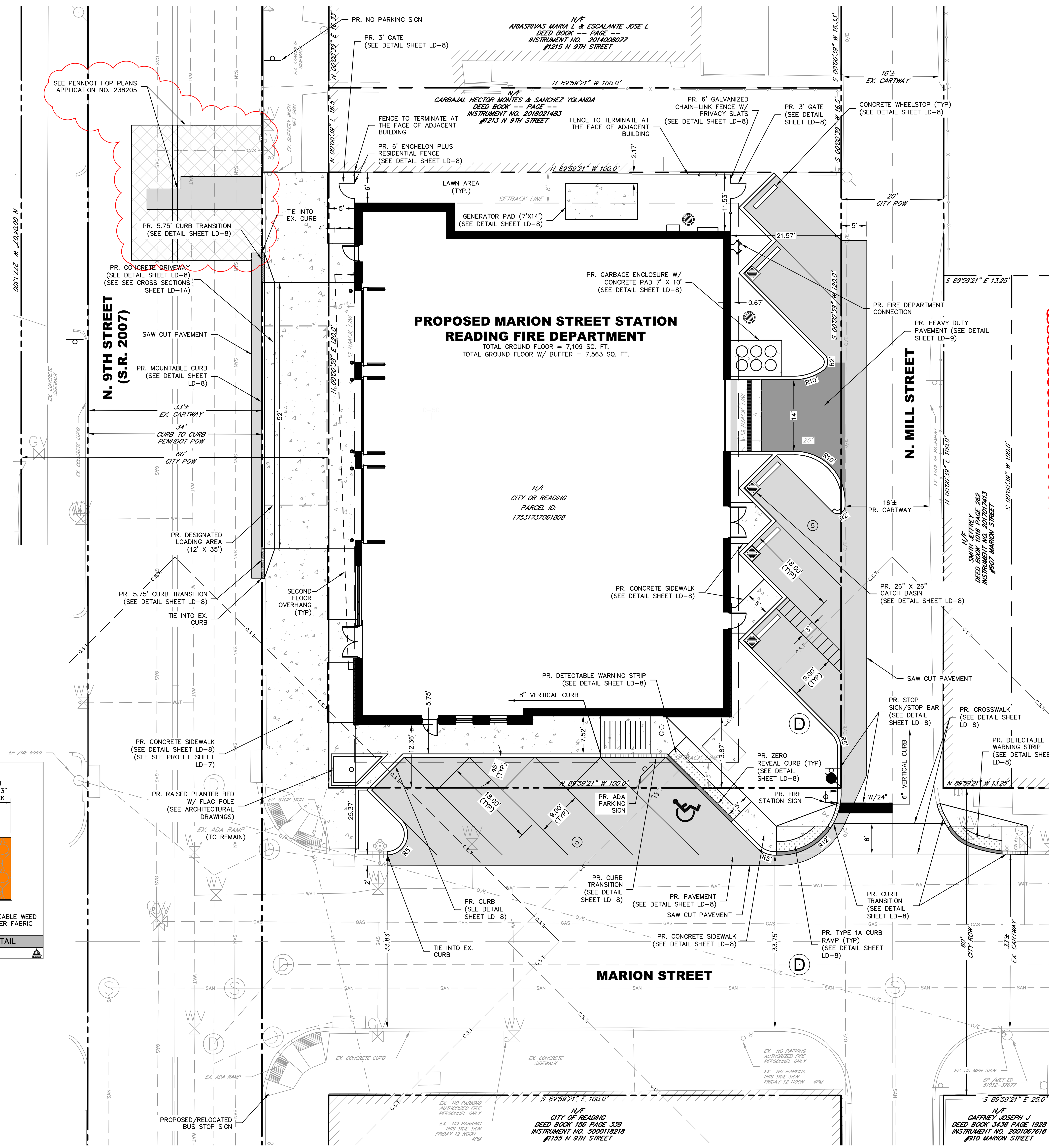
DECIDUOUS SHRUB

KEY	QUAN.	BOTANICAL NAME / COMMON NAME	ROOT	SIZE @ PLANTING	SIZE @ MATURITY
B.T.	8	BERBERIS THUNBERGII / JAPANESE BARBERRY	NO. 5 CONT.	18" HEIGHT (MIN.)	4–7' SPREAD; 3–6' HEIGHT

ORNAMENTAL GRASS

KEY	QUAN.	BOTANICAL NAME / COMMON NAME	ROOT	SIZE @ PLANTING	SIZE @ MATURITY
M.S.	24	MISCANTHUS SINENSIS / MAIDEN GRASS	NO. 5 CONT.	18" HEIGHT (MIN.)	4' SPREAD; 3–4' HEIGHT

NOTE* : SEE SHEET LD–9 FOR LANDSCAPE DETAILS AND NOTES



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PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING BERKS COUNTY, PENNSYLVANIA

SITE LAYOUT PLAN

DRAWN BY:	CHECK BY:	CADD FILE No.	DATE:	JOB No.:	SCALE:
ARB	✓	1476–1 LD–STE	12–3–20	1476–1	1"=10'

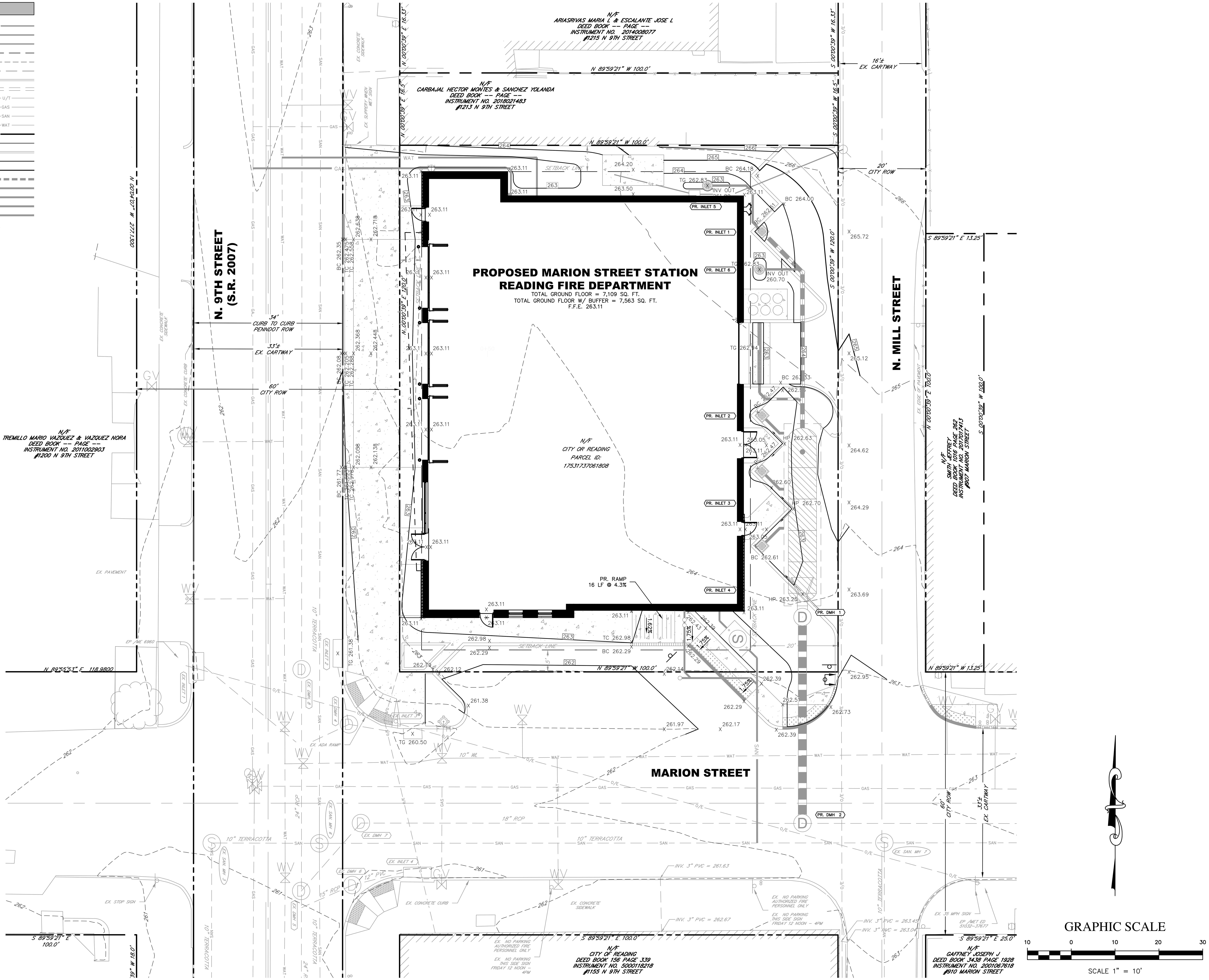
SHEET

LD–4

LEGEND

ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
PROPERTY LINE	
RIGHT-OF-WAY	
PROPOSED CURB	
PROPOSED GRADES	###
PROPOSED INDEX GRADES	###
PROPOSED DRAINAGE	
PROPOSED SANITARY SEWER	SAN
PROPOSED UNDERGROUND ELECTRIC	U/E
PROPOSED NATURAL GAS	GAS
PROPOSED WATER	WAT

	EXISTING	PROPOSED
UTILITY POLE		
GUY WIRE		
ELECTRIC MANHOLE	E	E
GAS MANHOLE	G	G
SANITARY SEWER MANHOLE	S	S
STORM DRAIN MANHOLE	D	D
TELEPHONE MANHOLE	T	T
WATER MANHOLE	W	W
GAS VALVE	GV	
GAS METER		
WATER VALVE	WV	
FIRE HYDRANT		
INLET		
LIGHT POLE		
STREET SIGN		



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1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

SITE GRADING PLAN

DRAWN BY: ARB	CHECK BY:
CADD FILE No. 1476-1 LD-GU	
DATE: 12-3-20	JOB No.: 1476-1
SCALE: 1'=10"	

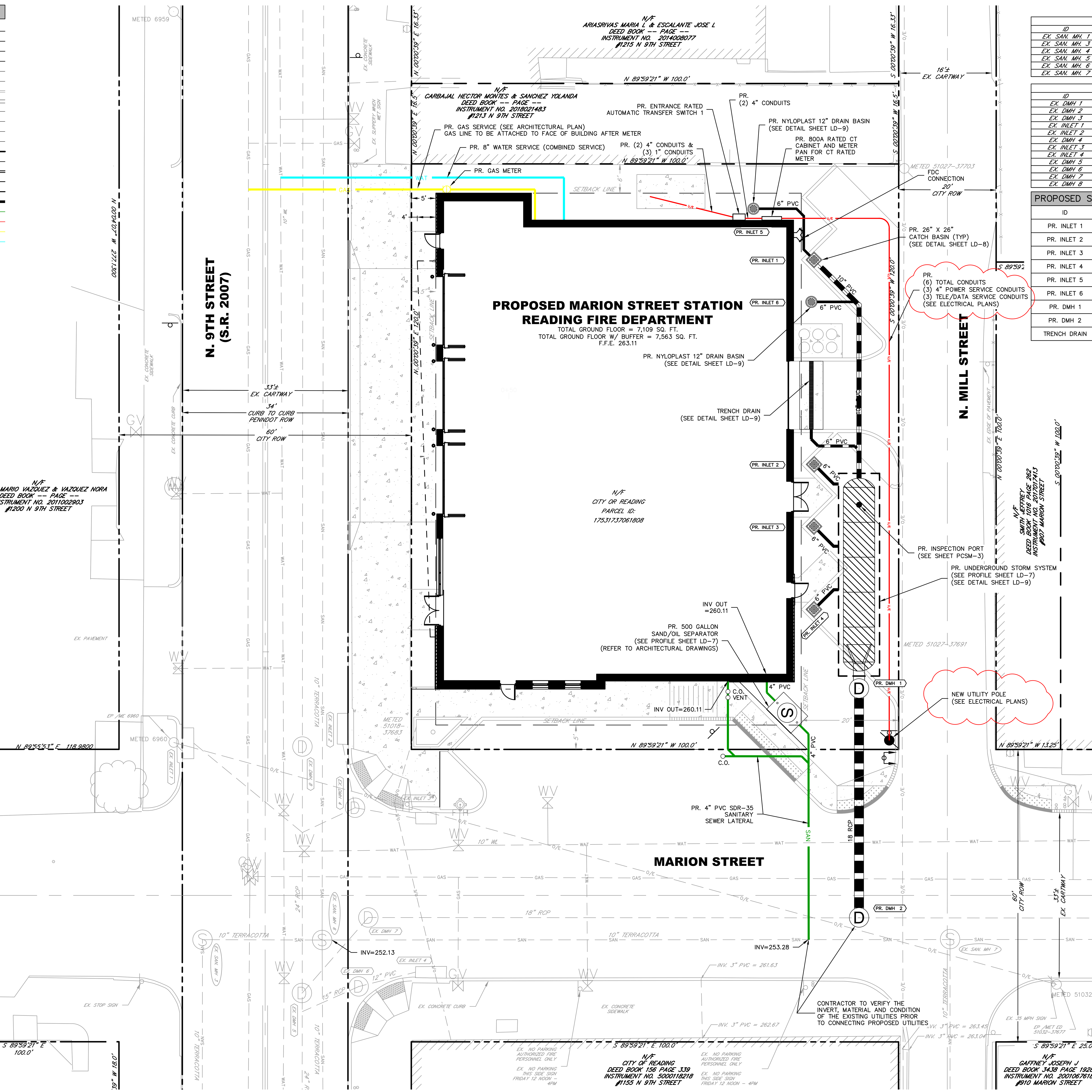
SHEET
LD-5

LEGEND

- ADJOINING PROPERTY LINE
- EASEMENT LINE
- CENTER LINE
- BUILDING SETBACK LINE
- EXISTING GRADES
- EXISTING INDEX GRADES
- EXISTING CURB
- EXISTING DRAINAGE
- EXISTING UNDERGROUND TELEPHONE — U/T
- EXISTING NATURAL GAS — GAS
- EXISTING SANITARY SEWER — SAN
- EXISTING WATER — WAT
- PROPERTY LINE
- RIGHT–OF–WAY
- PROPOSED CURB
- PROPOSED GRADES
- PROPOSED INDEX GRADES
- PROPOSED DRAINAGE
- PROPOSED SANITARY SEWER — SAN
- PROPOSED UNDERGROUND ELECTRIC — U/E
- PROPOSED NATURAL GAS — GAS
- PROPOSED WATER — WAT

EXISTING / PROPOSED

- UTILITY POLE
- GUY WIRE
- ELECTRIC MANHOLE
- GAS MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GAS VALVE
- GAS METER
- WATER VALVE
- FIRE HYDRANT
- INLET
- LIGHT POLE
- STREET SIGN



EXISTING SANITARY MANHOLE TABLE						
ID	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. SAN. MH. 1	266.88	257.73	257.58	–	257.53	–
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EX. SAN. MH. 5	258.36	247.36	–	–	247.21	–
EX. SAN. MH. 6	261.53	252.33	252.13	252.01	251.93	–
EX. SAN. MH. 7	262.48	254.33	253.43	–	253.43	–

EXISTING STORM STRUCTURE TABLE						
ID	GRATE ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. DMH 1	266.89	260.24	259.42	–	259.29	–
EX. DMH 2	266.67	259.82	259.57	259.07	259.02	–
EX. DMH 3	263.76	256.21	256.04	–	255.91	–
EX. INLET 1	261.08	–	–	–	257.88	–
EX. INLET 2	261.38	–	–	–	257.98	–
EX. DMH 4	261.54	257.54	257.24	–	256.84	–
EX. INLET 3	260.50	–	–	–	257.30	–
EX. INLET 4	261.06	–	–	–	257.39	–
EX. DMH 5	261.35	253.25	253.20	–	253.15	–
EX. DMH 6	260.99	256.29	–	–	255.79	–
EX. DMH 7	261.65	254.65	–	–	254.55	–
EX. DMH 8	–	–	–	–	–	–

PROPOSED STORM STRUCTURES						
ID	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELEV.
PR. INLET 1	262.61	260.86	–	–	260.76	260.76
PR. INLET 2	262.47	–	–	–	259.93	259.93
PR. INLET 3	262.47	–	–	–	259.93	259.93
PR. INLET 4	262.61	–	–	–	259.93	259.93
PR. INLET 5	262.83	–	–	–	261.22	261.22
PR. INLET 6	262.83	–	–	–	260.70	260.70
PR. DMH 1	263.92	257.05	–	–	260.13	256.13
PR. DMH 2	262.32	259.35	–	–	255.84	255.84
TRENCH DRAIN	262.94	–	–	–	261.56	261.56

GRAPHIC SCALE

10 0 10 20 30

SCALE 1" = 10'

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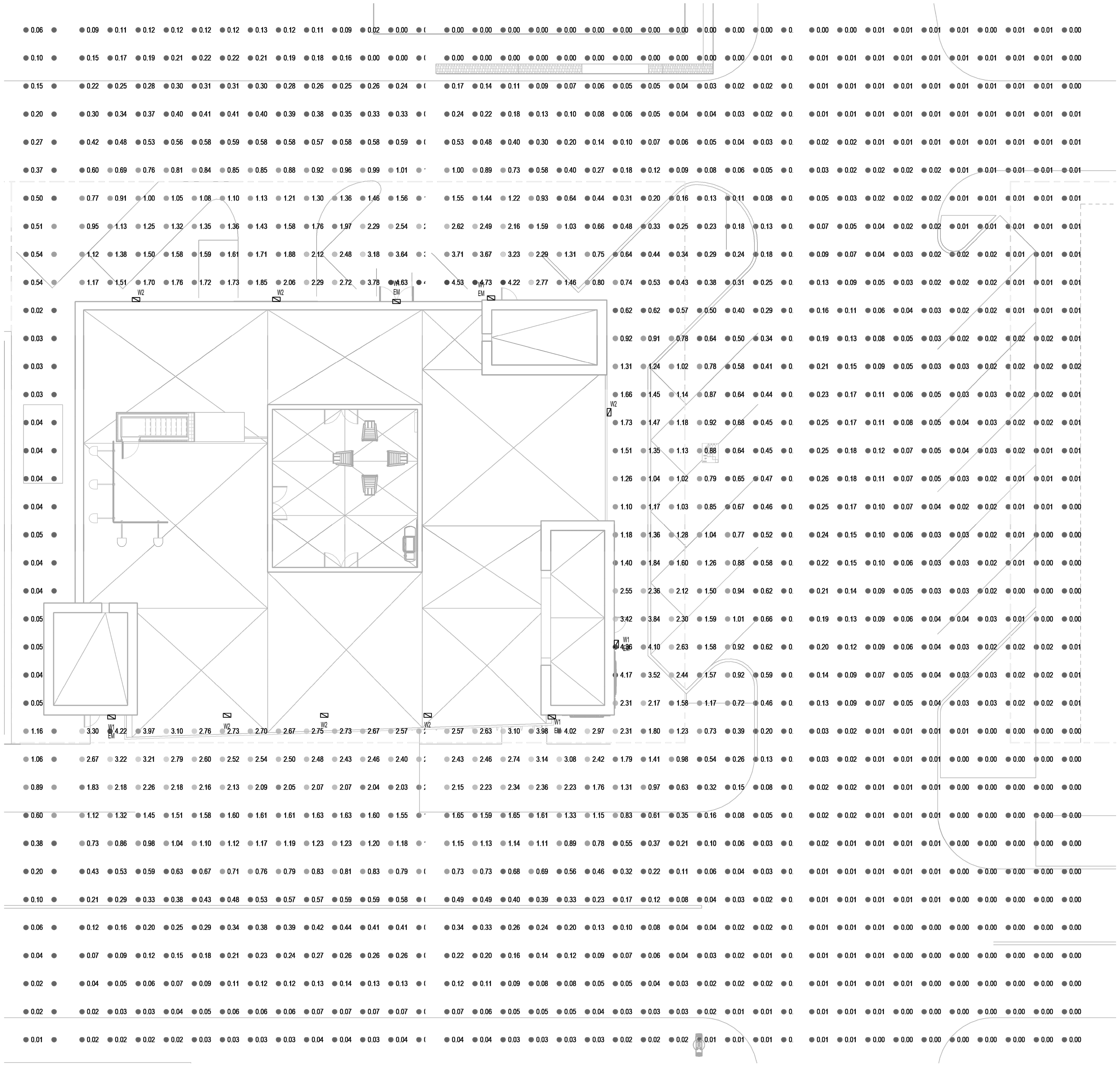
MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

SITE UTILITY PLAN

DRAWN BY: ARB
CHECK BY: ✓
CADD FILE No. 1476–1 LD–LAND
DATE: 12–3–20
JOB No.: 1476–1
SCALE: 1"=10'

SHEET LD–6



GARDCO by signify

Wall Mount

LED Wall Sconce

101L

Project:
Location:
Cat.No:
Type: W1 & W2
Lamps: Qty:
Notes:

Gardco 101 LED wall sconces feature a low-profile design that provides wide flexibility in high performance exterior wall illumination. Full cutoff performance, usable illumination patterns, and powerful wattages combine into a compact and architecturally pleasing design. 101L sconces are available in Type 2, 3, and 4 distributions, and provide output of up to 9500 lumens. Energy saving control options increase energy savings and offer California Title 24 compliance. Emergency Battery Backup option available for path of egress.

W1 - 101L-16L-650-NW-G1-3-EBPC-120-_-_-BZ

Ordering guide example: 101L-32L-700-NW-G1-3-120-IMRI2-BZ

	Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage	Options: Controls	Options: Electrical	Finish
W2 -	101L	32L	1000	NW-G1	3		UNV			BZ
	101L 101L LED Wall Sconce	**16L** 16 LEDs (1 module) **32L** 32 LEDs (2 module)	16L: **530** 530mA; **650** 650mA[1]; **700** 700mA; **1000** 1000mA; **1200** 1200mA 32L: **530** 530mA; **650** 650mA[1]; **700** 700mA; **1000** 1000mA[2]	**CW-G1** Cool White 5700K, 70CRI Generation 1 **NW-G1** Neutral White 4000K, 70CRI Generation 1 **WW-G1** Warm White 3000K, 70CRI Generation 1	**2** Type 2 **3** Type 3 **4** Type 4	**EBPC** Emergency Battery Pack Cold Weather[3,4,6,12] Leave blank to omit an emergency option	**UNV** 120-277V **HVU** 347-480V **120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V	**DD** 0-10V Dimming Driver[5,6] **DCC** Dual Circuit Control[6,7,8] DynaDimmer: Automatic Profile Dimming **CS50** Safety 50% Dimming (7 hours)[7,9,10] **CM50** Median 50% Dimming (8 hours)[7,9,10] **CE50** Economy 50% Dimming (9 hours)[7,9,10] **DA50** All Night 50% Dimming[7,9,10] Photoelectric/Receptacle systems (Twist Lock Receptacle) **PCB** Photocontrol Button[5,10,11,12] **TLRD5** Twist Lock Receptacle 5-Pin[13] **TLRD7** Twist Lock Receptacle 7-Pin[13] **TLRPC** Twist Lock Receptacle w/ Photocell[11,12,16] Infrared Motion Response systems **IMRI2** Integral with #2 lens[9,12,14] **IMRI3** Integral with #4 lens[9,12,14] Network system (SiteWise) **SW** SW Integral module[4,17] Wireless system **LLC2** Integral module with #2 lens[5,7,9,15] **LLC3** Integral module with #3 lens[5,7,9,15]	Fusing **F1** Single (120, 277, 347VAC)[12] **F2** Double (208, 240, 480VAC)[12] **F3** Canadian Double Pull (208, 240, 480VAC)[12]	Textured **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray Customer specified **RAL** Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

1. 650mA only available with Emergency Battery Pack Cold Rated (EBPC) option
2. 32L rated for 30°C at 1000mA
3. Available for use with 16L and 32L in 530mA or 650mA only. Rated for -20°C to 35°C.
4. Available in 120 or 277V only.
5. Not available with Dual Circuit Control (DCC) option.
6. EBPC is not available with DCC.
7. Not available with Dimming Driver (DD) option.
8. Available in 32L with 530mA. Consult technical support center for use with photocell and CS/CM/CE/DA.
9. Available in 120-277V (UNV) only.
10. Not available with LLC, TLR and DCC.
11. Not available with 480V.
12. Must specify input voltage.
13. TLRD5/7 option not available with LLC, PCB, DCC. Works with 3 or 5 pin NEMA photocell dimming. Dimming will not be connected to TLR if ordering with DD, CS/CM/CE/DA and IMRI.
14. Not available with DD, DCC or LLC.
15. LLC2/3 Not available with TLR, PCB, IMRI, CS/CM/CE/DA. Ships with WS accessory attached to wireless module. Not for use with LLCR accessory.
16. Not available with PCB, TLRD5/7, DCC, LLC.
17. SW option is not available with any other control options with the exception of IMRI2, IMRI3 motion response options.

101L 10/18 page 1 of 7

DLC cULus

SITE FOOT-CANDLE ANALYSIS SCHEDULE

Calculation Points Name	Average	Maximum	Minimum	Avg/Min	Max/Min
Site	1 fc	5 fc	0 fc	3324691.6	31507390.5

GENERAL FOOT-CANDLE ANALYSIS NOTES

1 ALL EXTERIOR WALL MOUNTED LIGHTING (W1 & W2) FIXTURES SHALL BE INSTALLED ON A LIGHTING CIRCUIT CONTROLLED BY DIGITAL TIMECLOCK WITH PHOTOCELL FOR AUTOMATIC DUSK TO DAWN OPERATION, LIGHTING CIRCUIT SHALL ALSO BE PROVIDED WITH CONTROLS TO DIM ALL W1 & W2 FIXTURES TO 50% OPERATION FOR THE HOURS BETWEEN 10PM AND 7AM.

2 E.C. SHALL FURNISH AND INSTALL PHOTOCELL DEVICE WITH DIGITAL TIMECLOCK ON NORTHEAST CORNER OF BUILDING'S ROOF. E.C. SHALL INSTALL PHOTOCELL SO OPERATION IS NOT INHIBITED DUE TO ADJACENT LIGHTING SOURCES IN THE AREA. E.C. SHALL SET FC LEVEL OF PHOTOCELL ENSURE EXTERIOR LIGHTING CONTROL SYSTEM IS FULLY 100% COMPLETE AND OPERATIONAL TO THE OWNER'S SATISFACTION.

GRAPHIC SCALE

10 0 10 20 30

SCALE 1" = 10'

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Gettysburg, PA 17325 Phone (717) 337-3827 www.FCAP.com
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1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS

FOR

CITY OF READING

ON

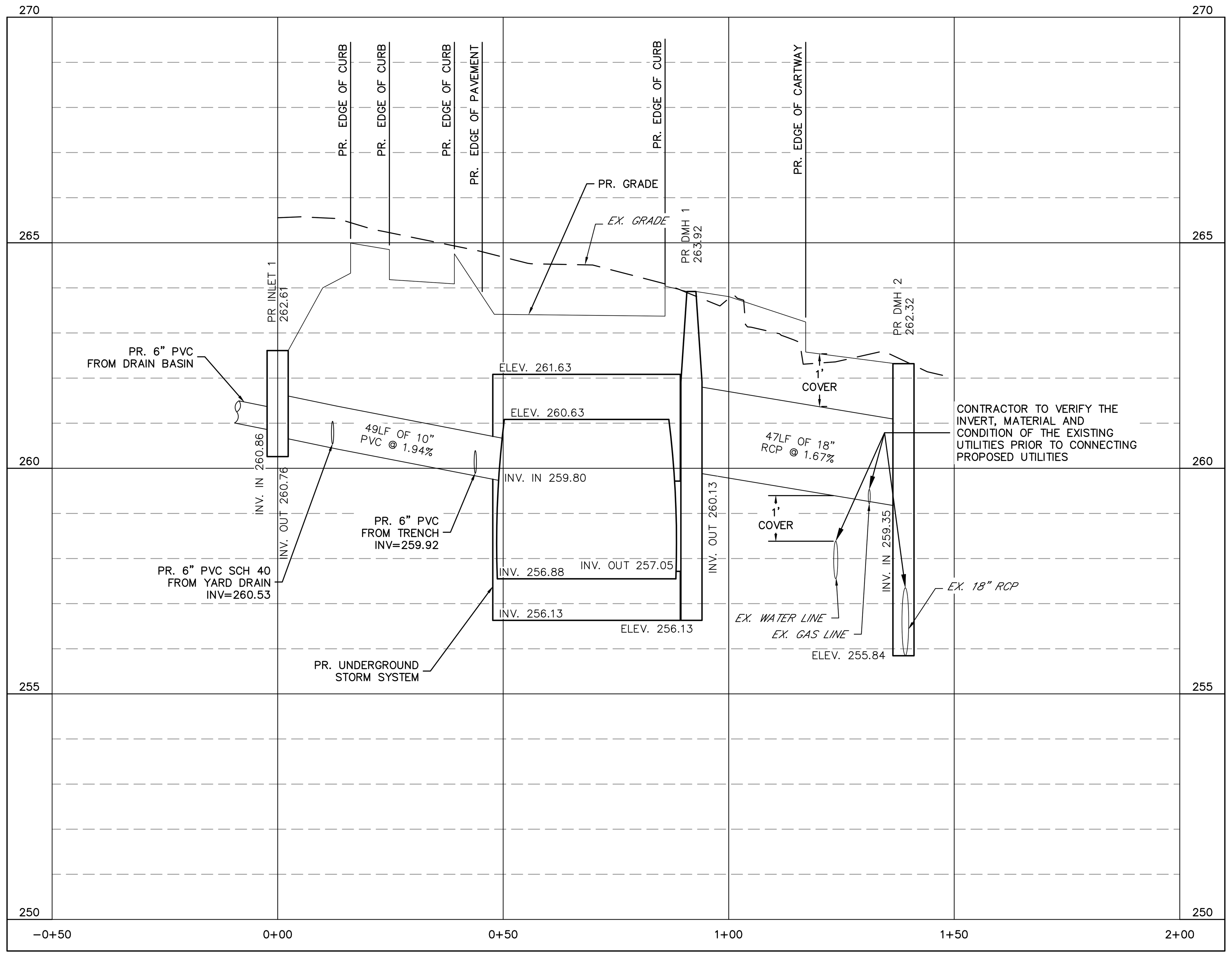
1201 NORTH 9TH STREET

CITY OF READING BERKS COUNTY, PENNSYLVANIA

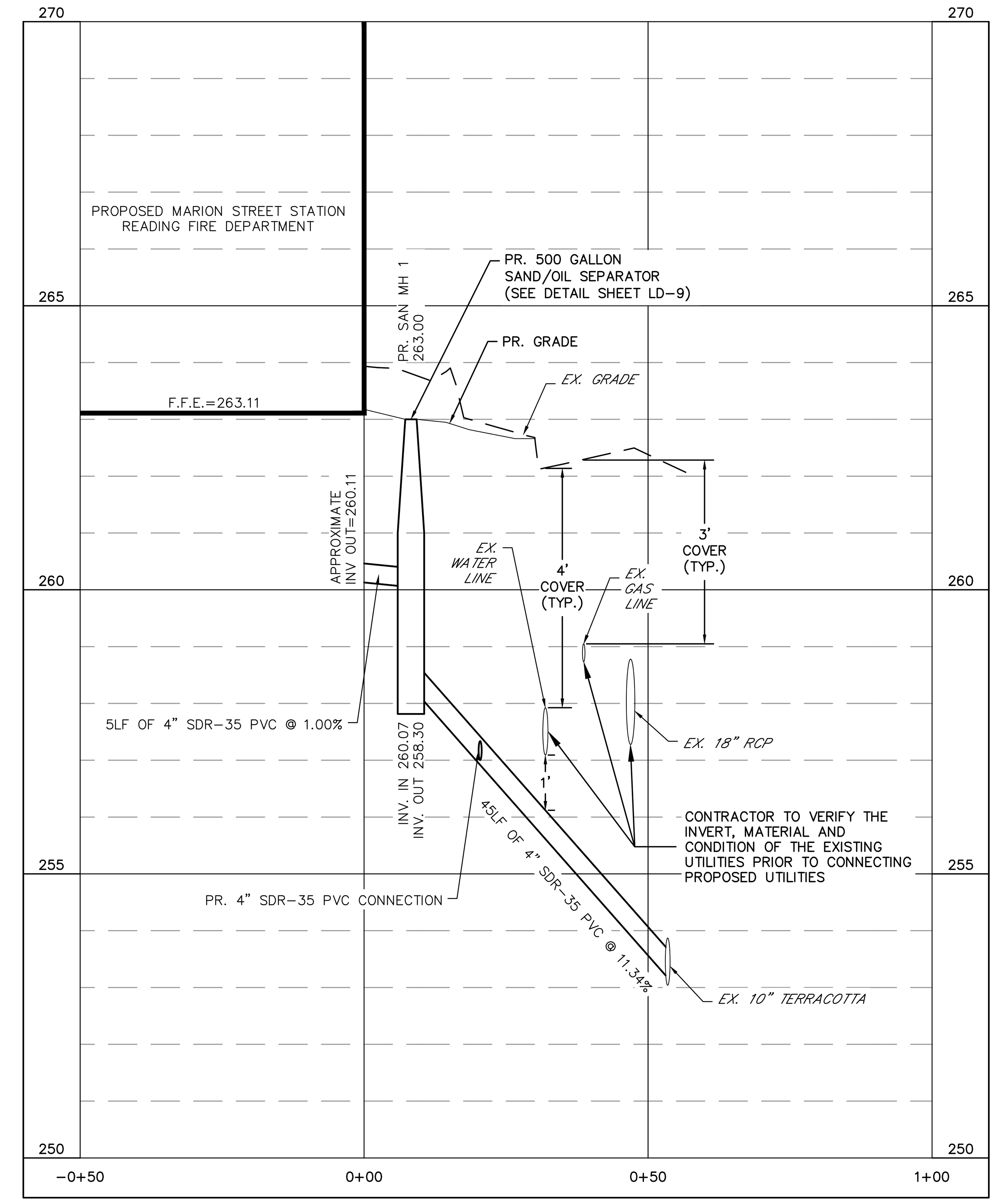
LIGHTING PLAN

DRAWN BY: ARB
CHECK BY:
CADD FILE No. 1476-1 LD-LIGHT
DATE: 3-26-21
JOB No.: 1476-1
SCALE: NOTED

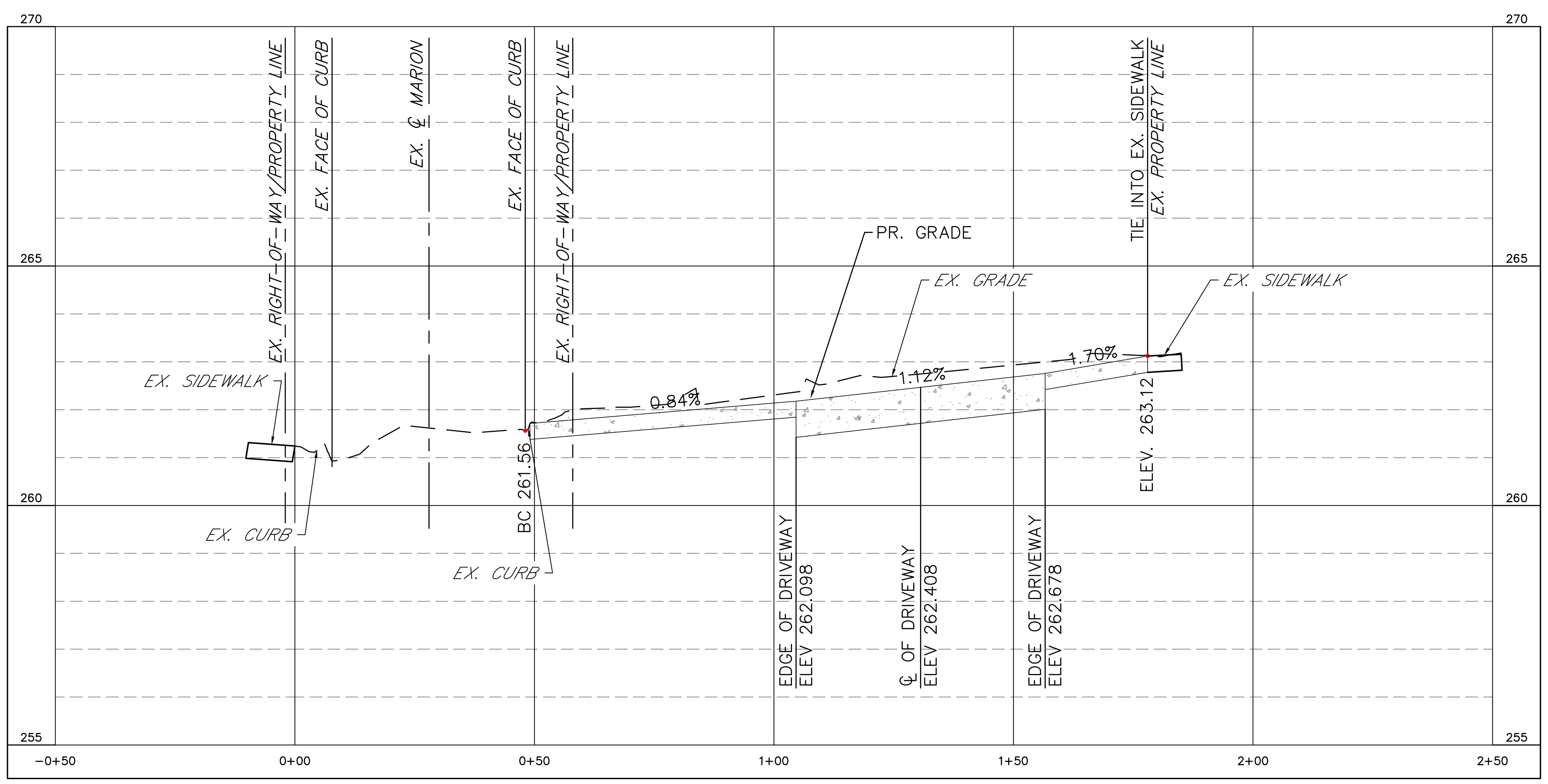
SHEET LD-6A



PR. INLET 1 TO PR DMH 2
SCALE: HORZ 1"=20'
VERT 1"=2'



PR. 4IN SANITARY LATERAL
SCALE: HORZ 1"=30'
VERT 1"=3'



PROPOSED PEDESTRIAN ACCESSIBLE WAY
SCALE: HORZ 1"=20'
VERT 1"=2'

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1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

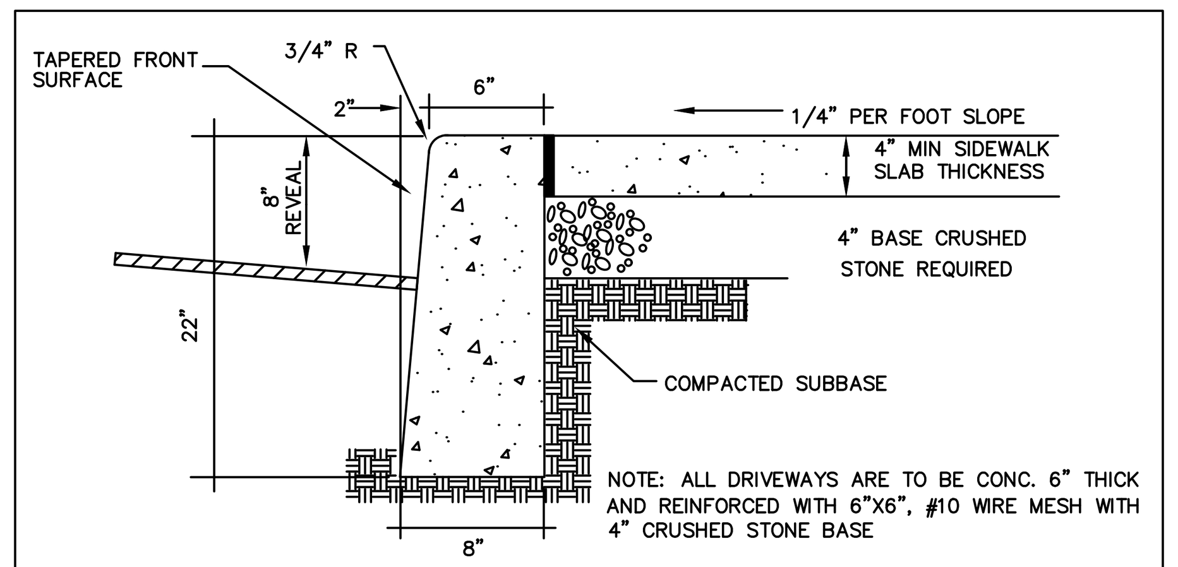
MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

PROFILES

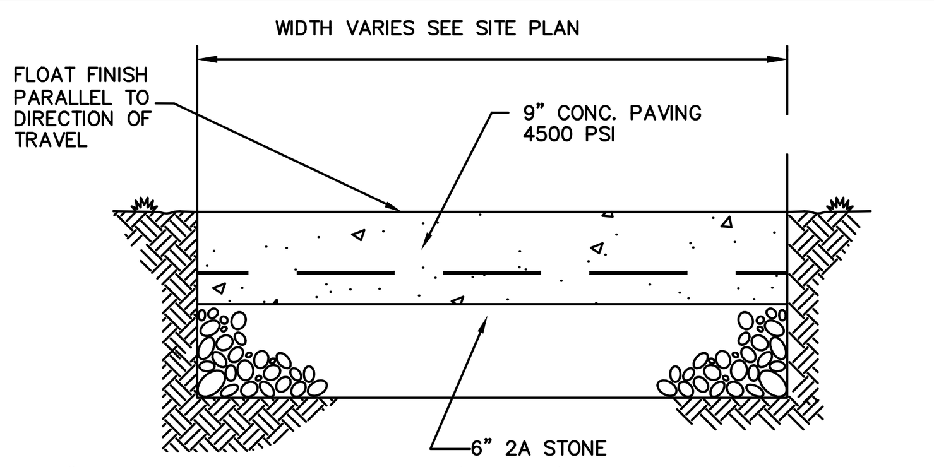
DRAWN BY: ARB
CHECK BY: ✓
CADD FILE No. 1476-1 LD-PRO
DATE: 12-3-20
JOB No.: 1476-1
SCALE: NOTED

SHEET
LD-7



CURB & SIDEWALK DETAIL

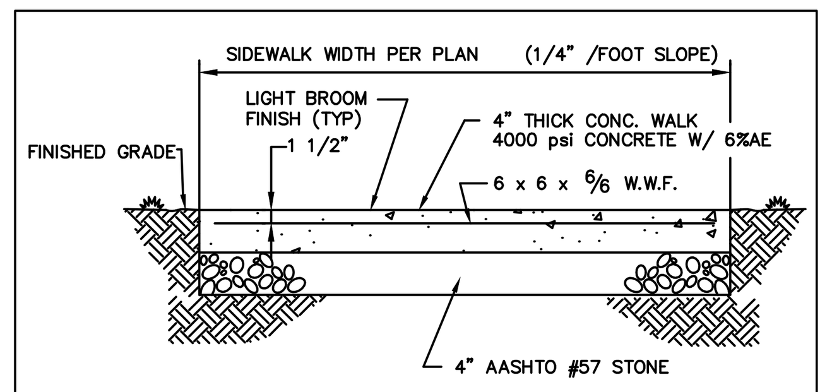
NOT TO SCALE



- 9" PORTLAND CEMENT CONCRETE MIX (4500 PSI)
- 6" 2A STONE AGGREGATE
- 18" LONG #8 DOWEL BARS PLACED 12" ON CENTER FOR LOAD TRANSFER, 6" FROM LONGITUDINAL JOINT
- MAXIMUM JOINT SPACING = 15 FEET, NO MID SLAB REINFORCEMENT
- 14" LONG #4 "J" TIE BARS PLACED 36" ON CENTER (GRADE 60, EPOXY COATED STEEL)

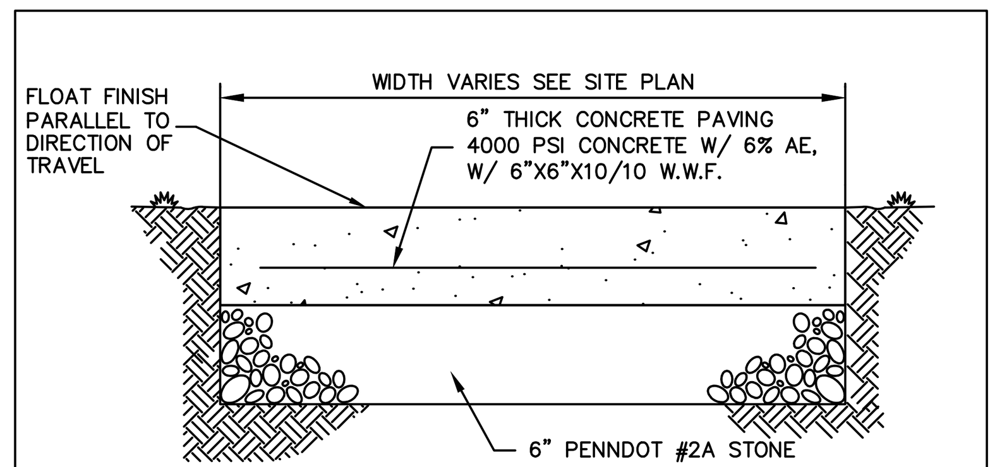
PR. 9TH STREET CONCRETE DRIVEWAY DETAIL

NOT TO SCALE



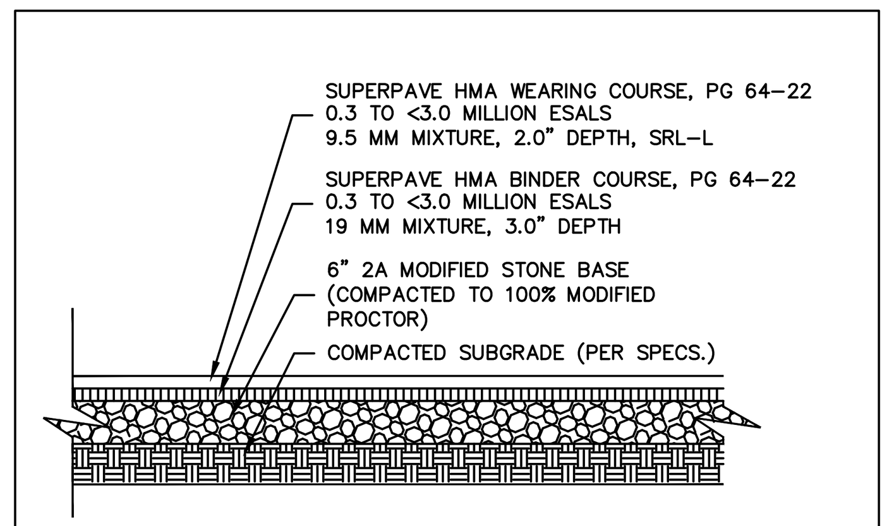
PEDESTRIAN CONCRETE WALK DETAIL

NOT TO SCALE



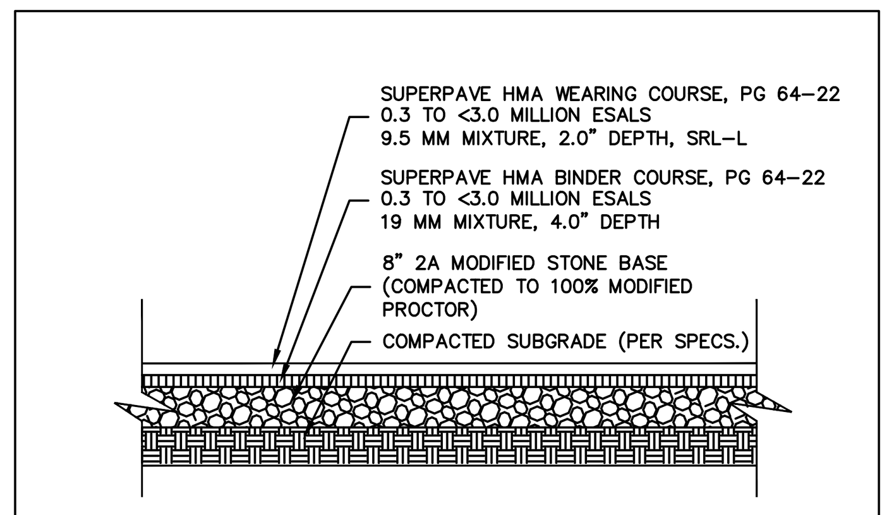
GENERATOR PAD DETAIL

NOT TO SCALE



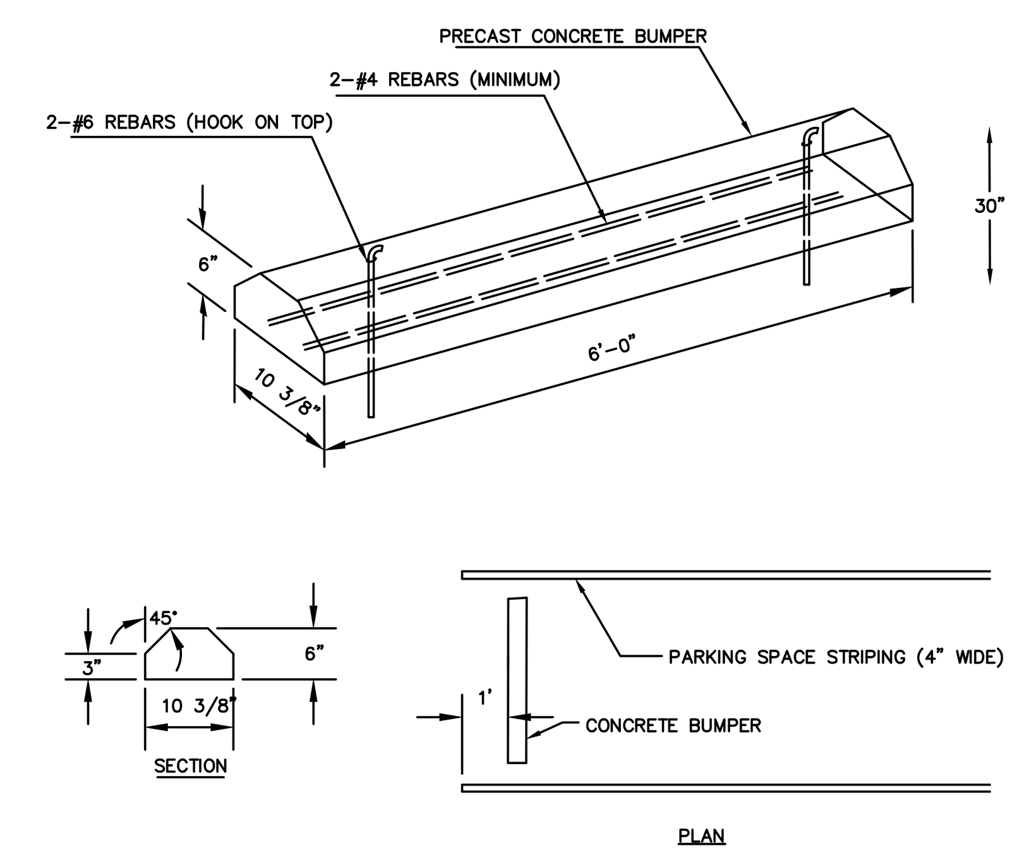
LIGHT DUTY PAVEMENT

NOT TO SCALE



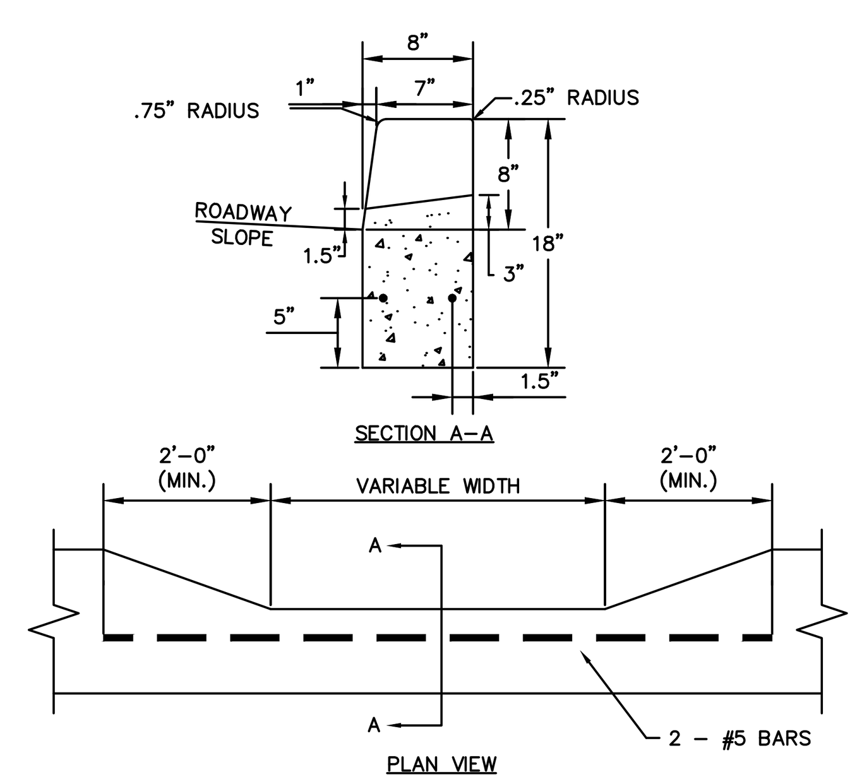
HEAVY DUTY PAVEMENT

NOT TO SCALE



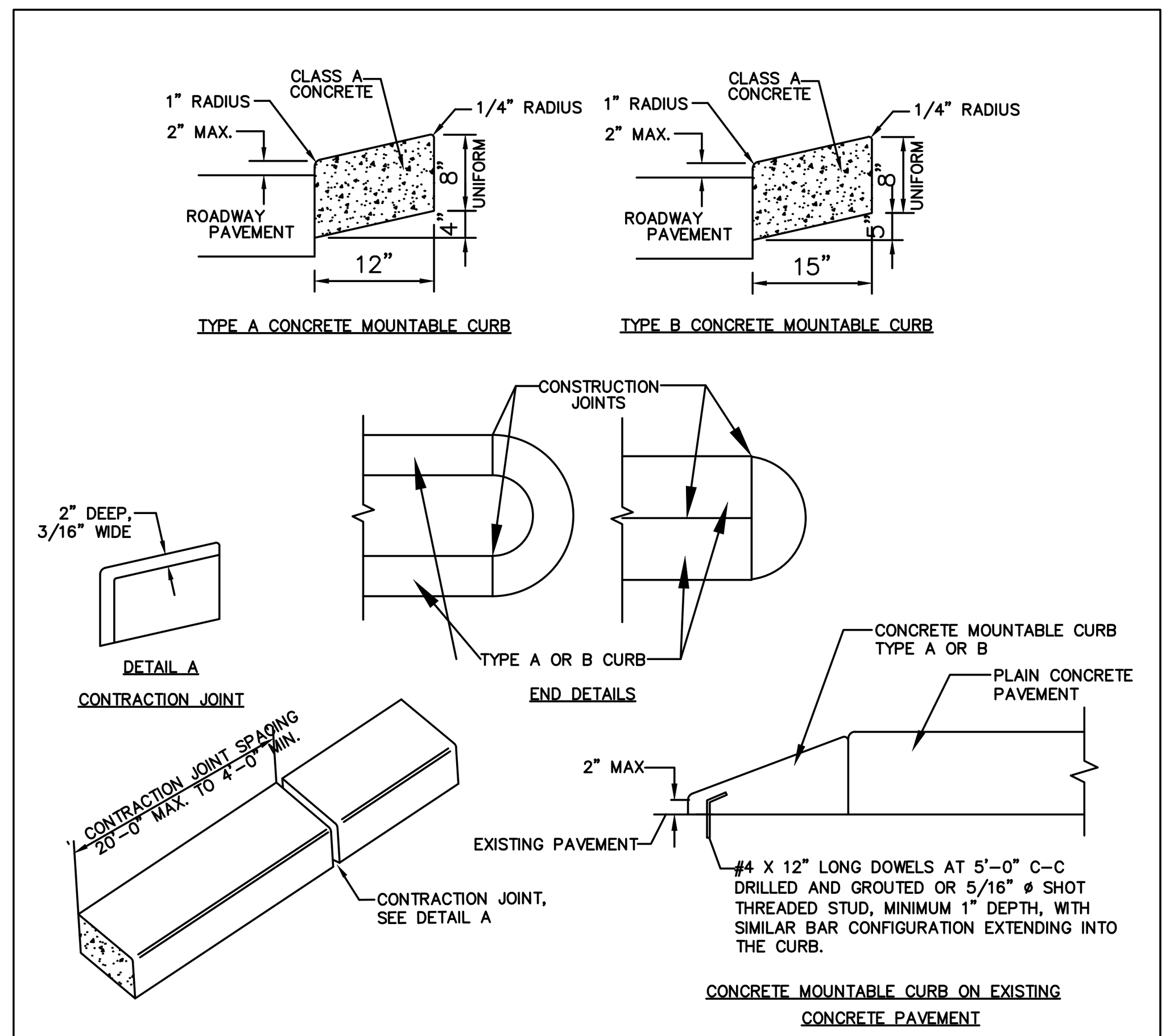
CONCRETE WHEELSTOP DETAIL

NOT TO SCALE



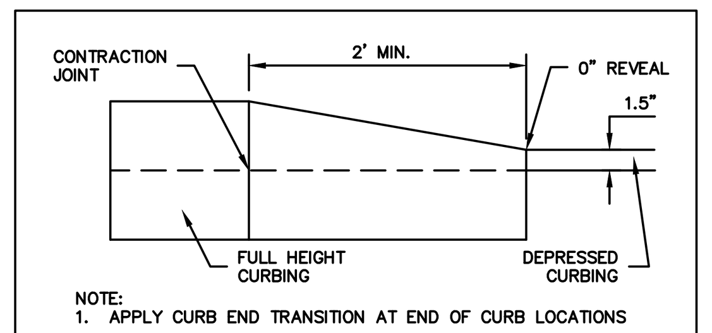
DETAIL OF DEPRESSED CURB

NOT TO SCALE



NO SHEET MOUNTABLE CONCRETE CURB

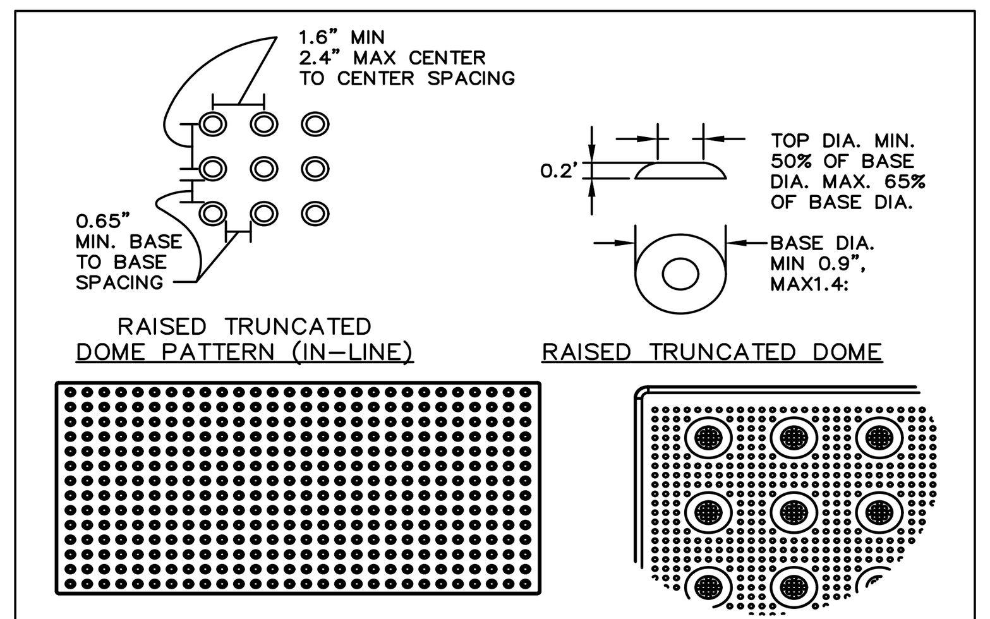
NOT TO SCALE



NOTE:
1. APPLY CURB END TRANSITION AT END OF CURB LOCATIONS

CURB TRANSITION DETAIL

NOT TO SCALE

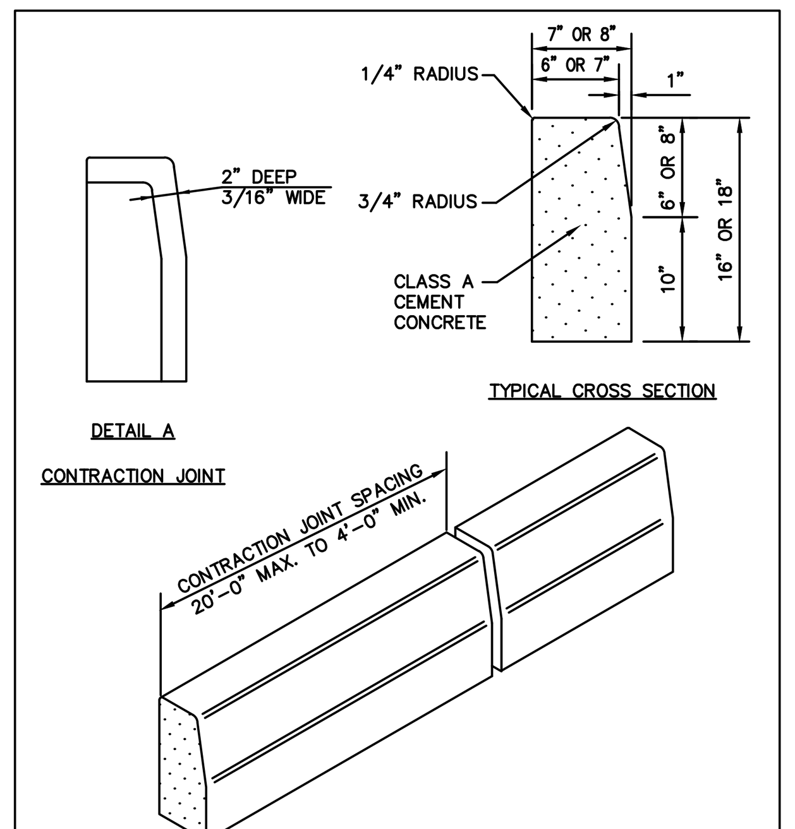


FIBERGLASS DETECTABLE WARNING SURFACE

1. 24"X48" FIBERGLASS PANELS TO BE EMBEDDED INTO 6" THICK CONCRETE
2. COLOR TO BE "BRICK RED" BY ADA SOLUTIONS, INC. OR APPROVED EQUAL.

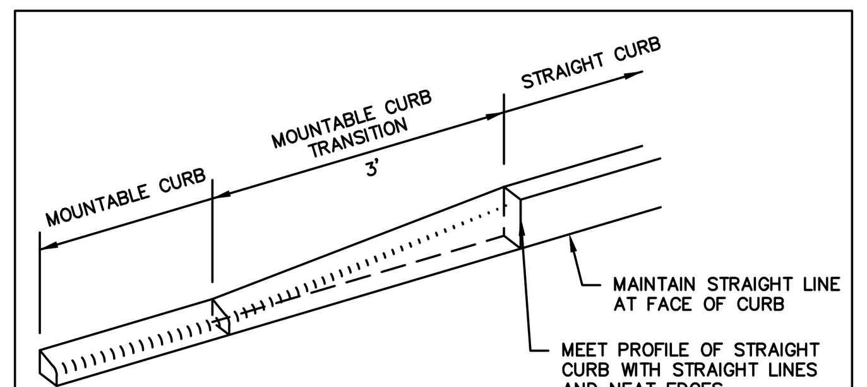
DETECTABLE WARNING STRIP

NOT TO SCALE



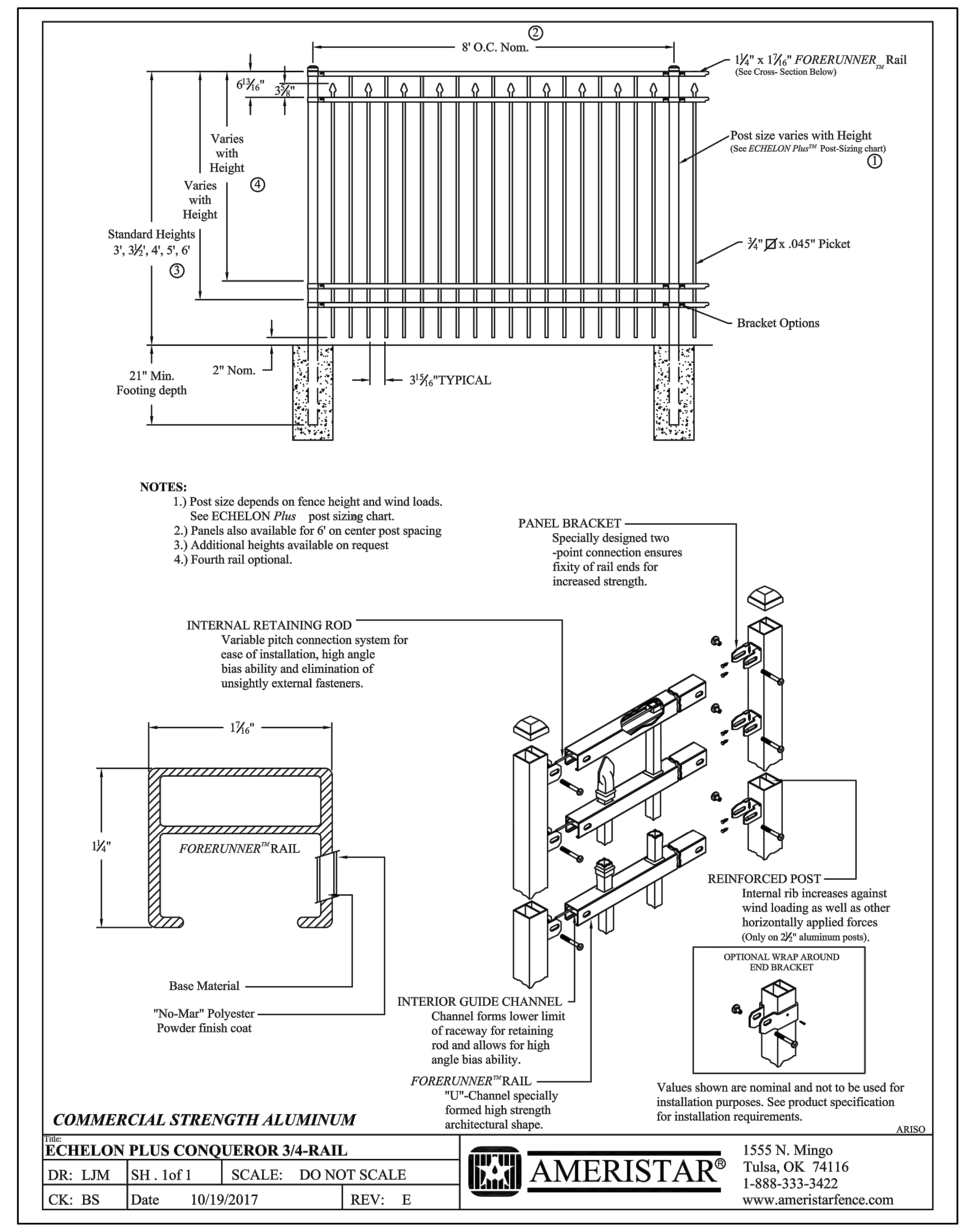
6"OR 8" PLAIN CEMENT CONCRETE CURB

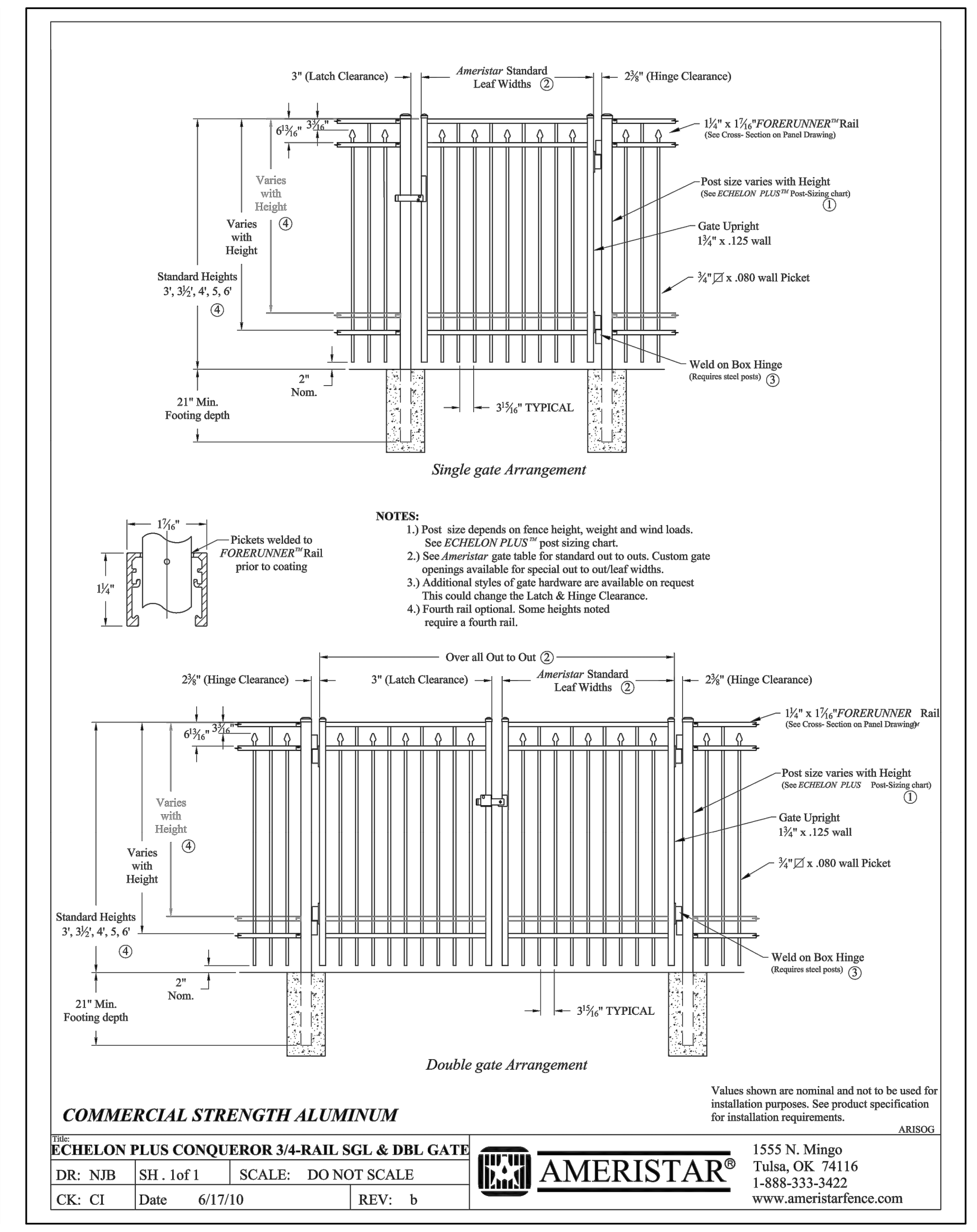
NOT TO SCALE

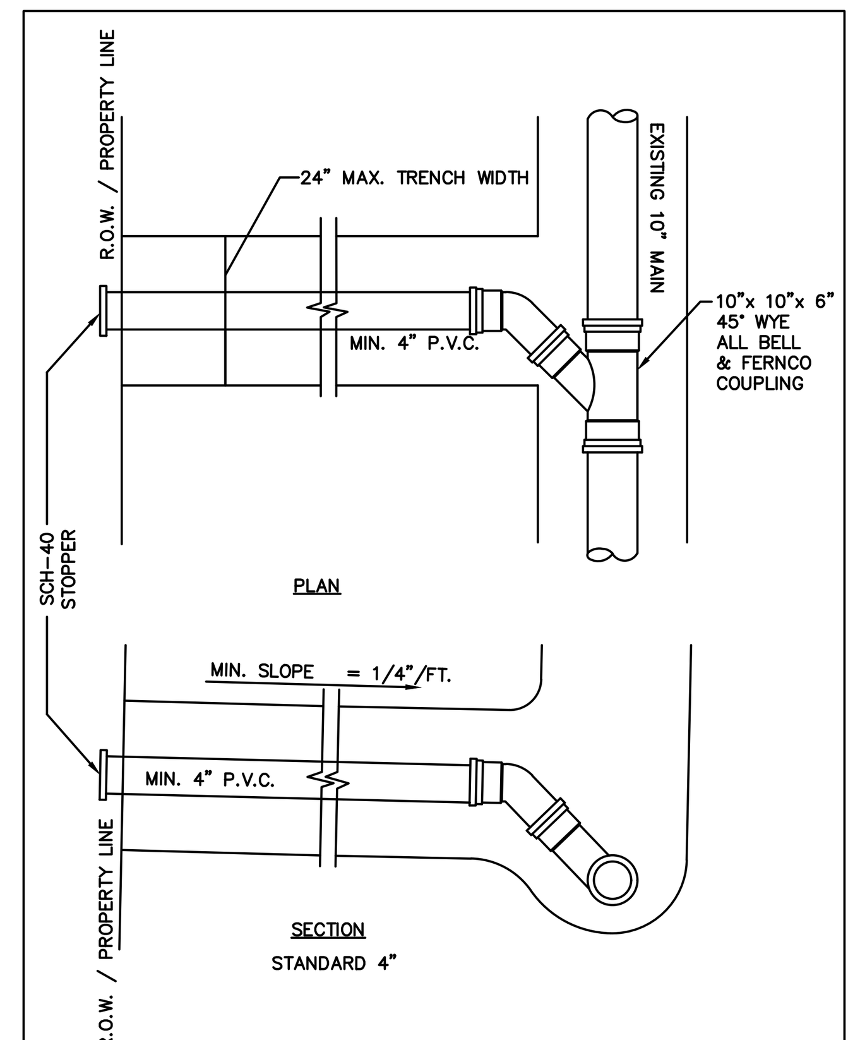


MOUNTABLE TO STRAIGHT CURB TRANSITION

NOT TO SCALE

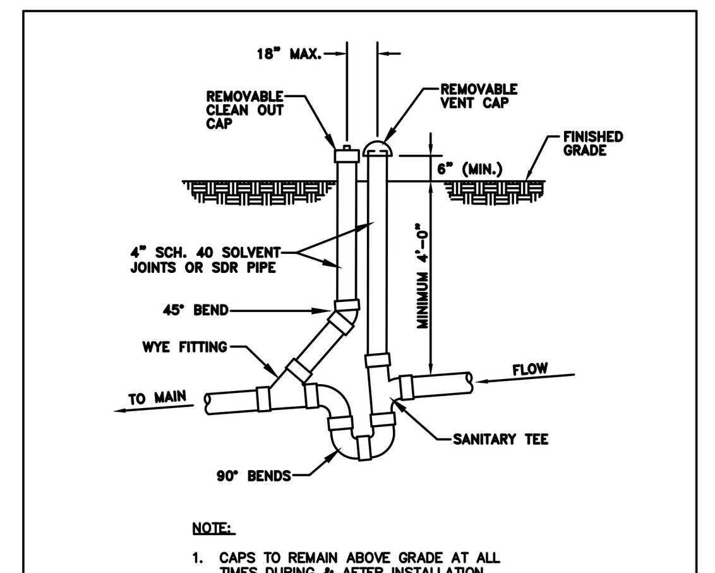






LATERAL CONNECTION

NOT TO SCALE

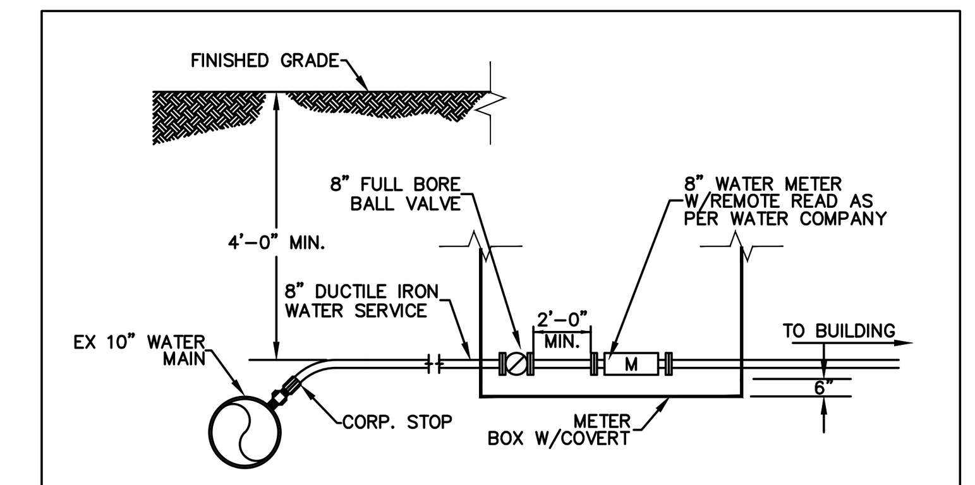


NOTE:
1. CAPS TO REMAIN ABOVE GRADE AT ALL TIMES DURING & AFTER INSTALLATION.
2. TO BE LOCATED IN MULCH AREA OUTSIDE EVERY BUILDING.

CLEANOUT WITH VENT

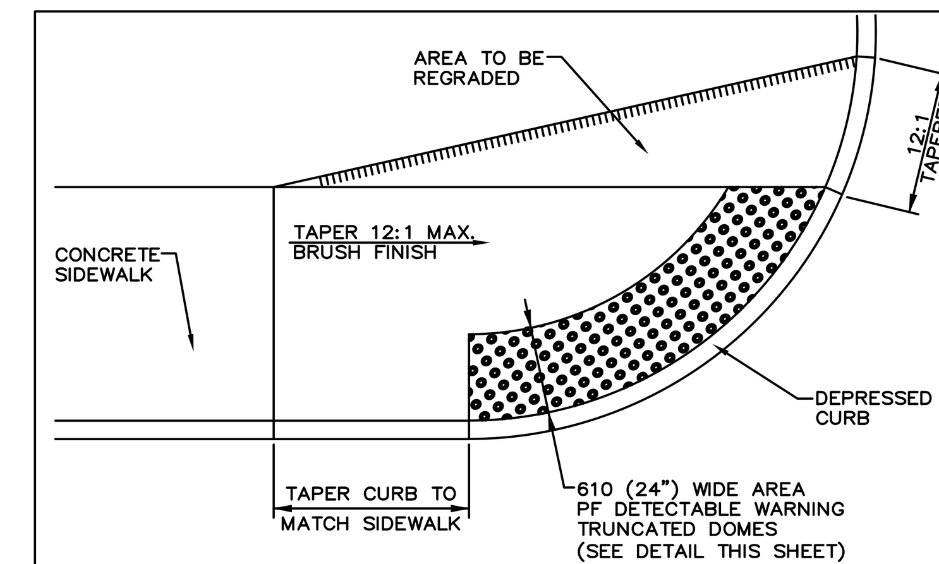
CLEANOUT WITH VENT

NOT TO SCALE



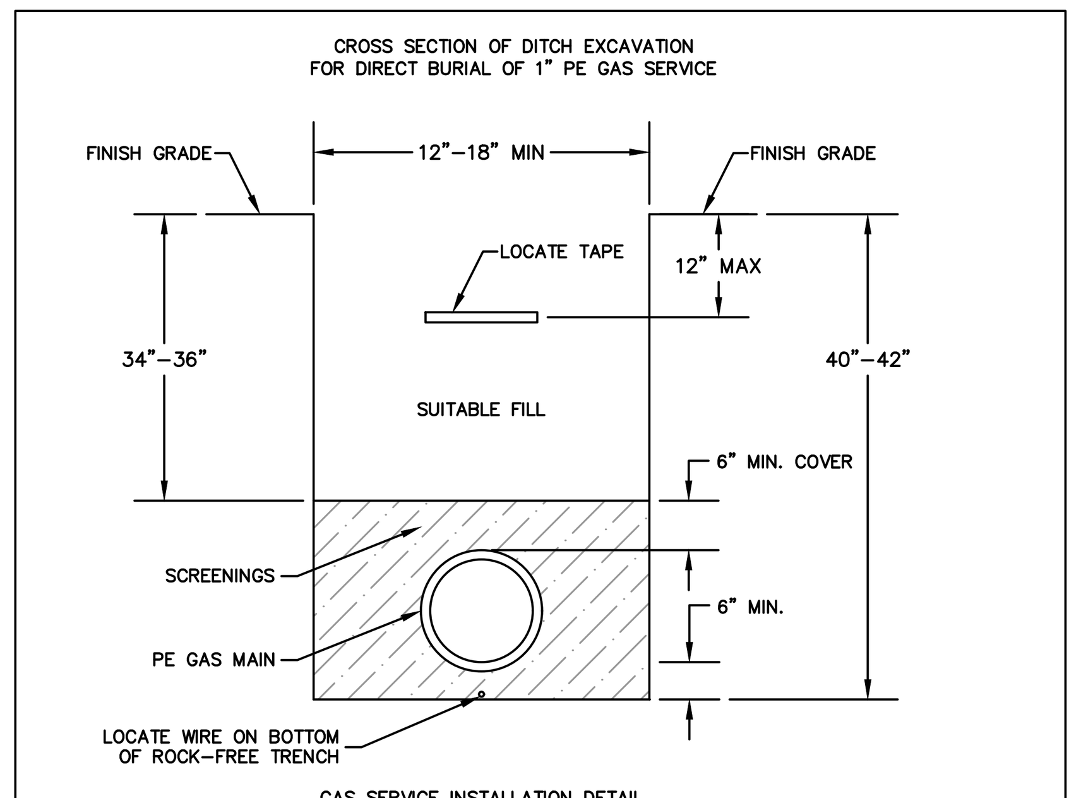
TYPICAL SERVICE CONNECTION

NOT TO SCALE



TYPE 1A CURB RAMP

NOT TO SCALE

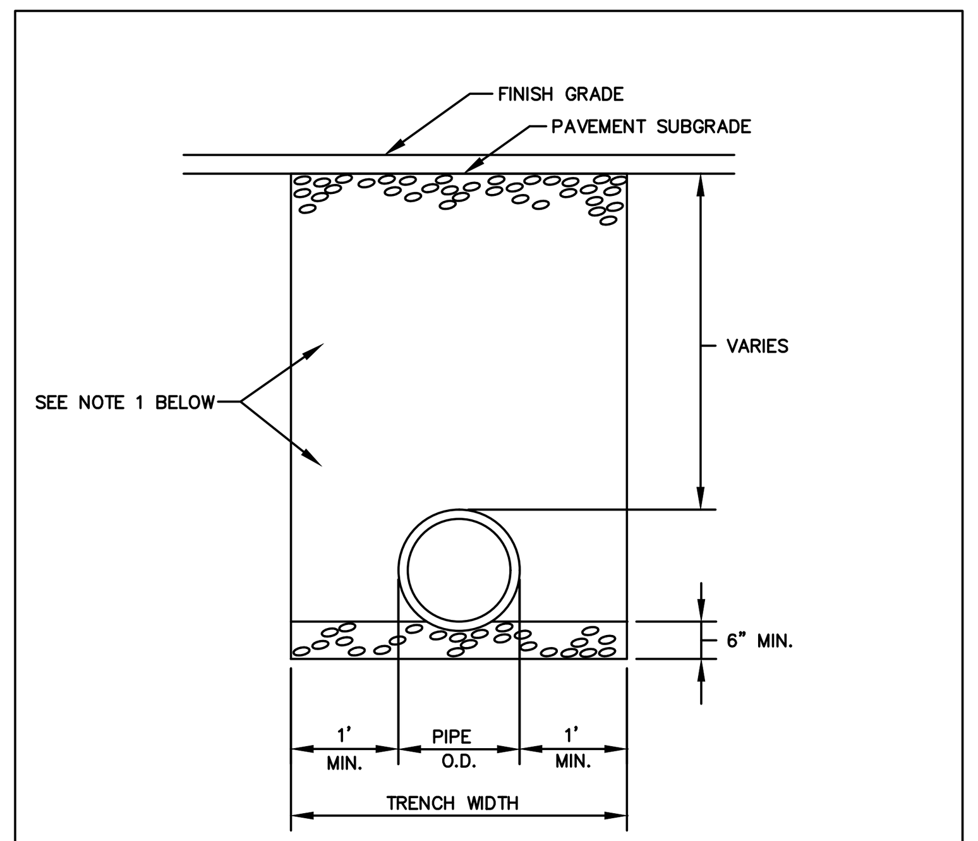


NOTE:

DITCH DEPTH MUST BE ADJUSTED TO COMPENSATE FOR THE SIZE OF PIPE IN ORDER TO MAINTAIN THE REQUIRES MINIMUM COVER OVER GAS MAIN.

GAS SERVICE INSTALLATION DETAIL

NOT TO SCALE



BEDDING AND BACKFILL NOTES

1. BEDDING

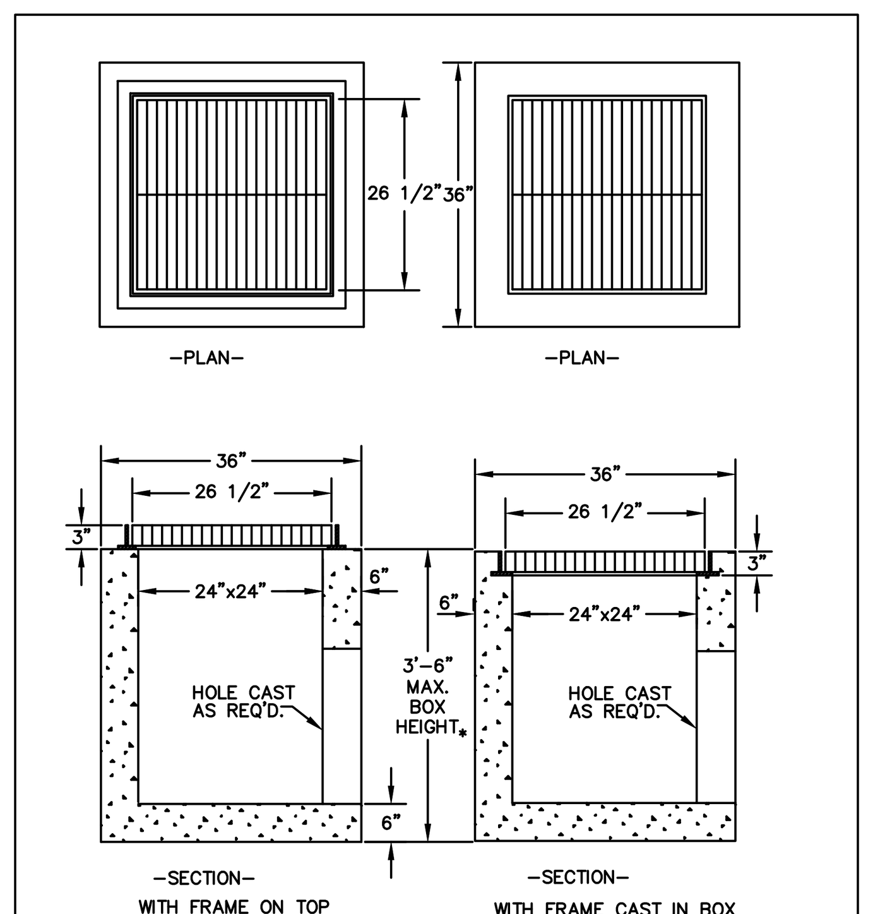
MATERIALS FOR PIPE BEDDING AND BACKFILL SHALL BE AASHTO No.57 COARSE AGGREGATE.

2. BACKFILL

a. No.57 BEDDING TO EXTEND FULL WIDTH OF PIPE REMOVAL/PIPE INSTALLATION TRENCH WITHIN THE CARTWAY AREA.
b. OUTSIDE THE CARTWAY AREA, BEDDING IS TO EXTEND A MINIMUM OF 1' AS SHOWN. ADDITIONAL TRENCH WIDTH IS TO BE CLEAN ACCEPTABLE EARTH AS PER NOTE 1 ABOVE.
c. BACKFILL IN PAVED AREAS SHALL BE 2-RC COARSE AGGREGATE COMPACTED TO 95% SSD DENSITY

TRENCH BEDDING AND BACKFILL REQUIREMENTS

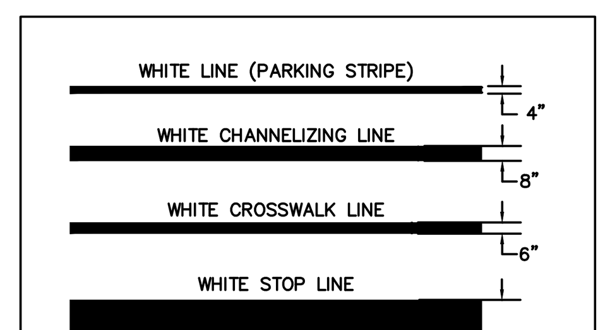
NOT TO SCALE



* RISER SECTIONS AVAILABLE

26" X 26" CATCH BASIN

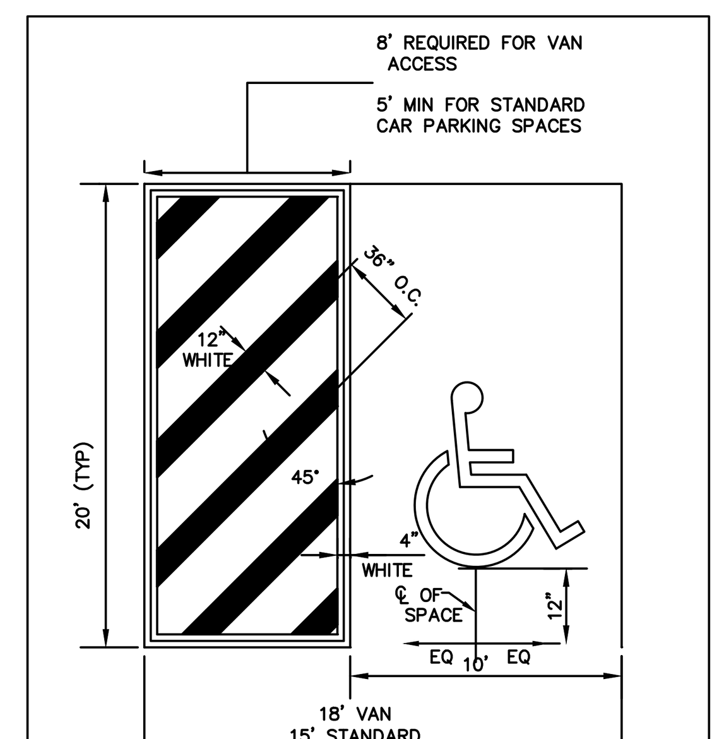
NOT TO SCALE



NOTE: SEE PLAN FOR LOCATION

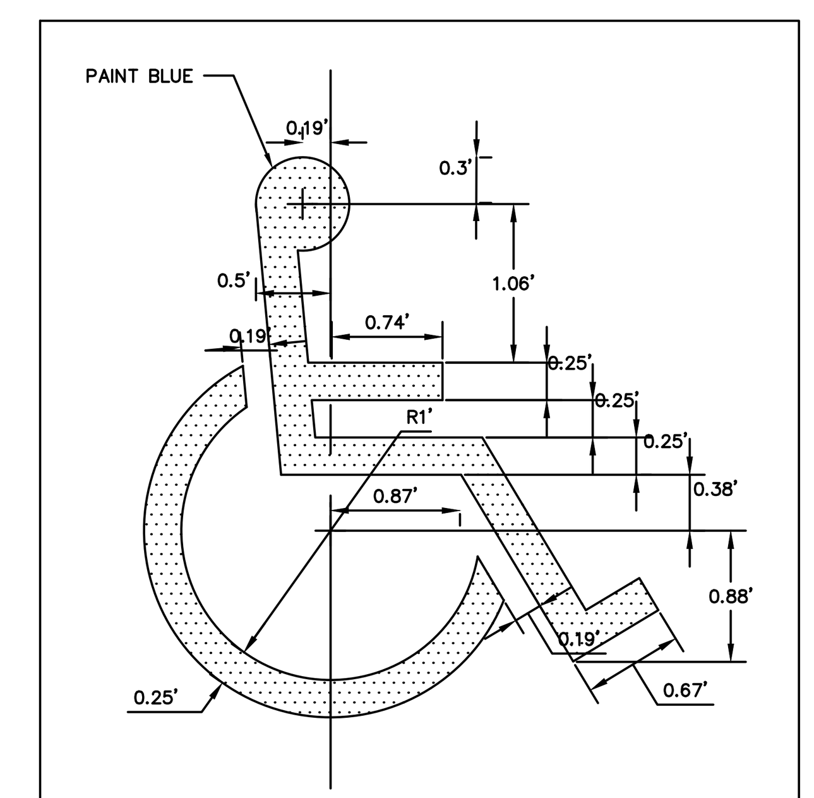
LINE SPECIFICATIONS

NOT TO SCALE



HANDICAP PARKING SPACE

NOT TO SCALE



NOTE: DO NOT REVERSE IMAGE.

INTERNATIONAL SYMBOL OF ACCESSIBILITY

NOT TO SCALE

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MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS

FOR

CITY OF READING

ON

1201 NORTH 9TH STREET

CITY OF READING — BERKS COUNTY, PENNSYLVANIA

DETAILS

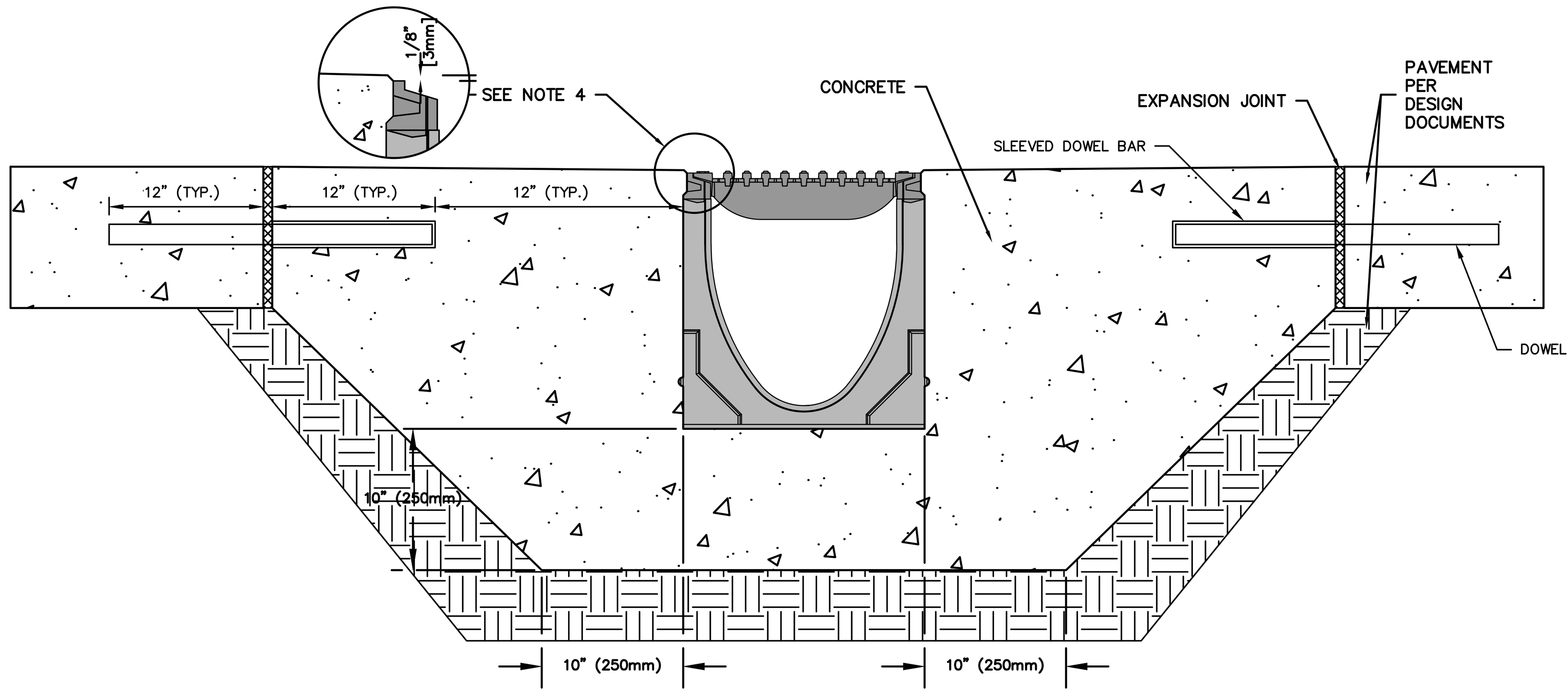
DRAWN BY: ARB — CHECK BY: ^ v

CADD FILE No. 1476-1 LD-DTL

DATE: 11-05-20 — JOB No.: 1476-1

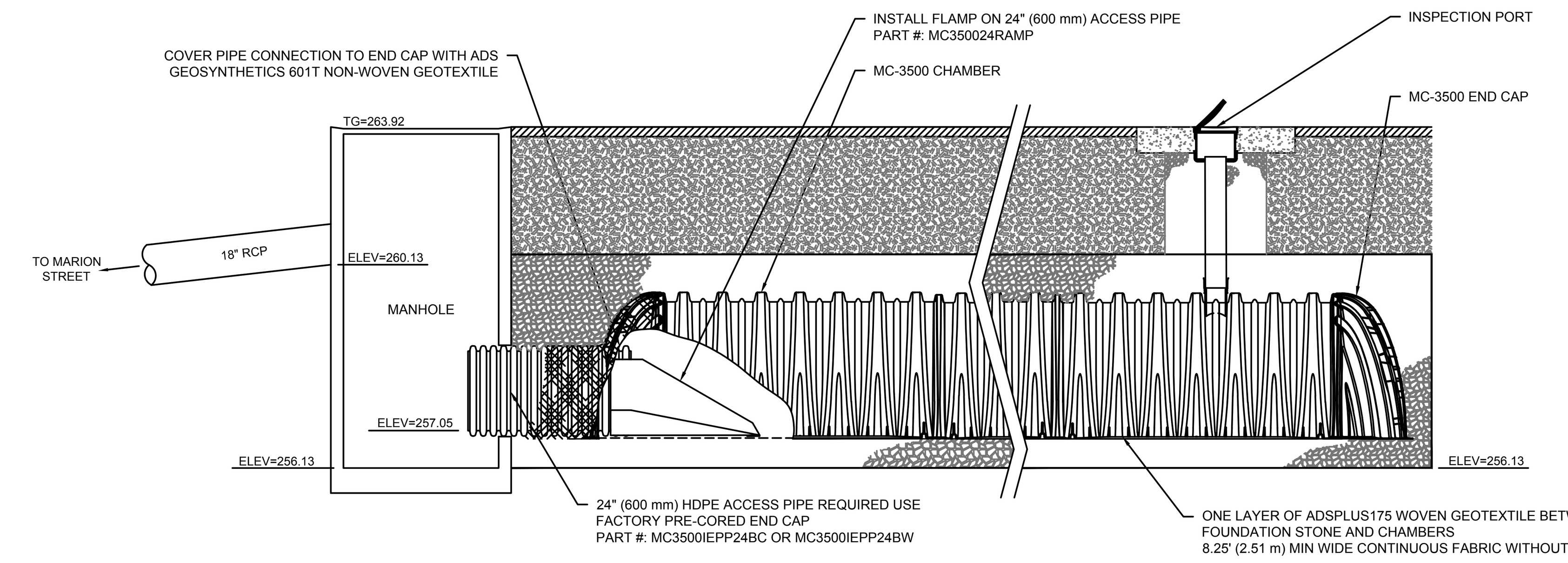
SCALE: NOTED

SHEET LD-8



NOTES:
1. TRENCH DRAIN TO BE ACO POWERDRAIN S200K LOAD CLASS E OR APPROVED EQUAL.
2. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS.
3. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
4. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND.
5. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

TRENCH DRAIN INSTALLATION DETAIL
NOT TO SCALE

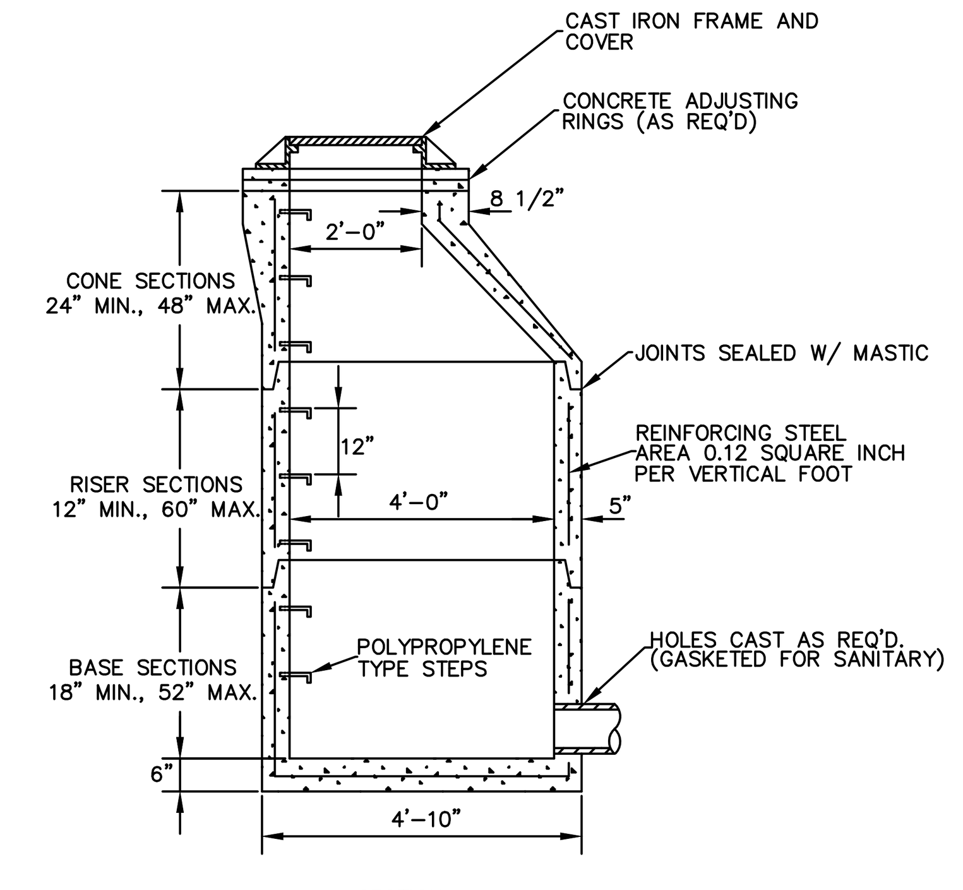


MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

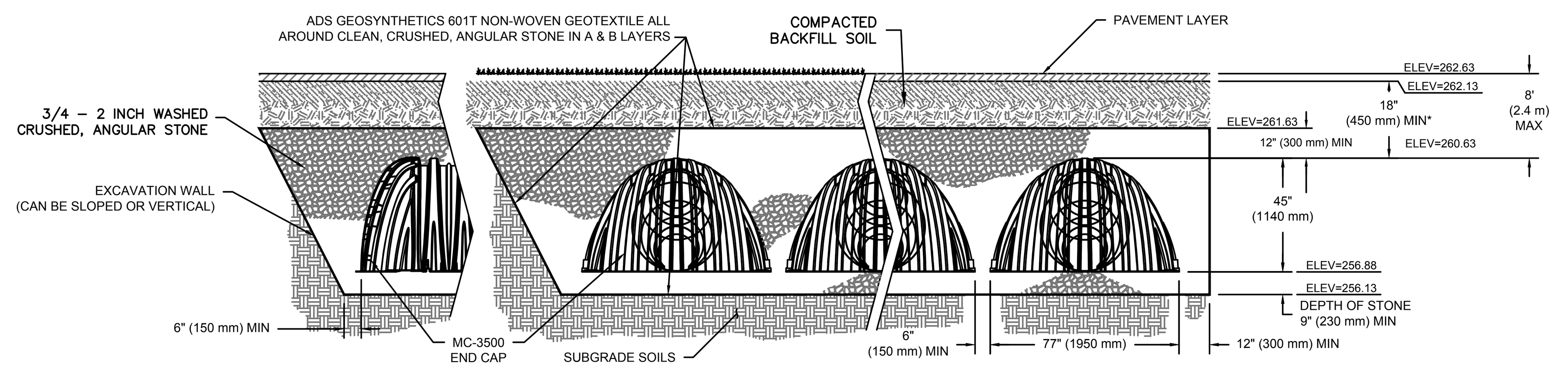
NOTES:
1. STORMTECH INFILTRATOR SYSTEM TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMENDATIONS. REFER TO STORMTECH'S DESIGN MANUAL. FOR STORMTECH INFORMATION CALL 1-888-892-2694.
2. REFER TO SITE PLANS FOR SPECIFIC SYSTEM LAYOUT AND CONFIGURATION.
3. IF SATURATED SUB-GRADE CONDITIONS ARE ENCOUNTERED, CONTRACTOR SHOULD IMMEDIATELY CONTACT PROJECT ENGINEER.

TYPICAL PROFILE FOR STORMTECH MC-3500 ISOLATOR ROW DETAIL
NOT TO SCALE

NOTE: MEETS ASTM C-478 SPECIFICATIONS



PRECAST CONCRETE MANHOLE 4 FT. DIAMETER
NOT TO SCALE



NOTES:
1. STORMTECH INFILTRATOR SYSTEM TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMENDATIONS. REFER TO STORMTECH'S DESIGN MANUAL. FOR STORMTECH INFORMATION CALL 1-888-892-2694.
2. REFER TO SITE PLANS FOR SPECIFIC SYSTEM LAYOUT AND CONFIGURATION.
3. IF SATURATED SUB-GRADE CONDITIONS ARE ENCOUNTERED, CONTRACTOR SHOULD IMMEDIATELY CONTACT PROJECT ENGINEER.

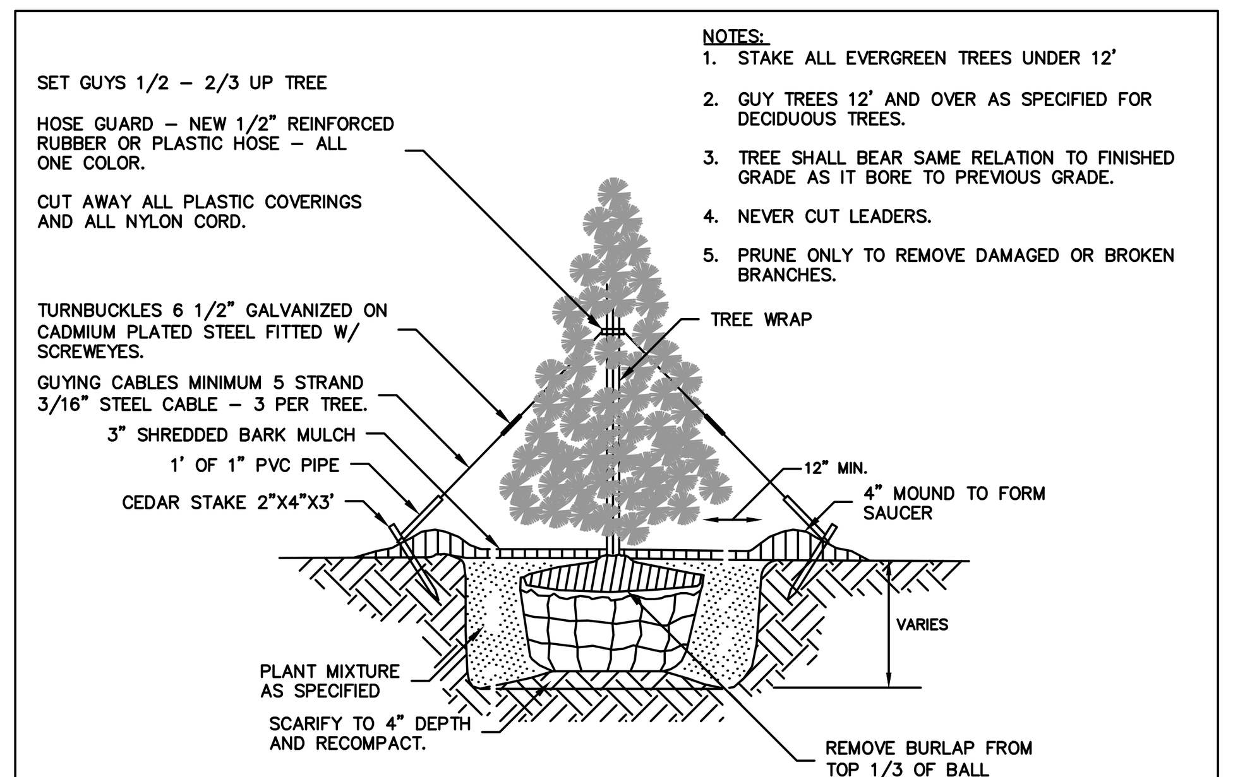
TYPICAL CROSS SECTION FOR STORMTECH MC-3500 INFILTRATION CHAMBER SYSTEM
NOT TO SCALE

PROPOSED LAYOUT

5	STORMTECH MC-3500 CHAMBERS
2	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
1118	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
350	SYSTEM AREA (SF)
100.0	SYSTEM PERIMETER (ft)

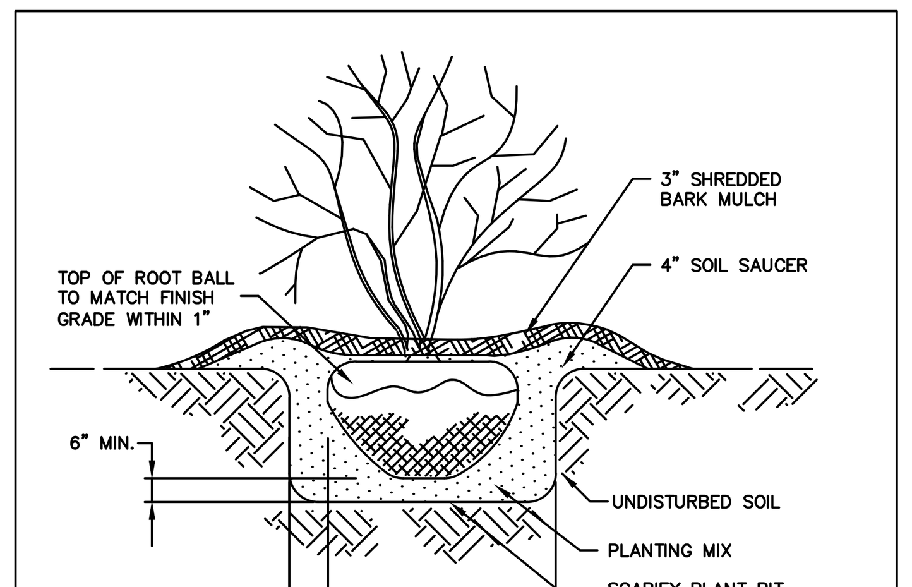
PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	268.63
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	262.63
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	262.13
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	262.63
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	262.13
TOP OF STONE:	261.63
TOP OF MC-3500 CHAMBER:	260.63
24" ISOLATOR ROW PLUS INVERT:	257.05
BOTTOM OF MC-3500 CHAMBER:	256.88
BOTTOM OF STONE:	256.13

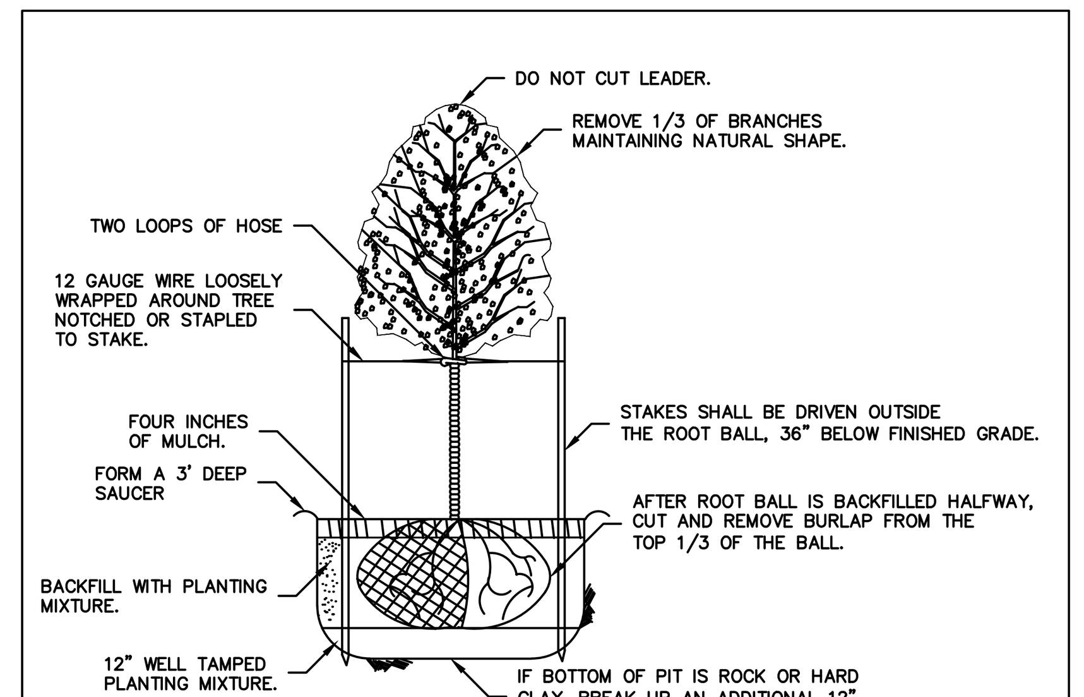


NOTES:
1. STAKE ALL EVERGREEN TREES UNDER 12'
2. GUY TREES 12' AND OVER AS SPECIFIED FOR DECIDUOUS TREES.
3. TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE.
4. NEVER CUT LEADERS.
5. PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES.

PLANTING AND STAKING METHODS FOR CONIFEROUS TREES
NOT TO SCALE

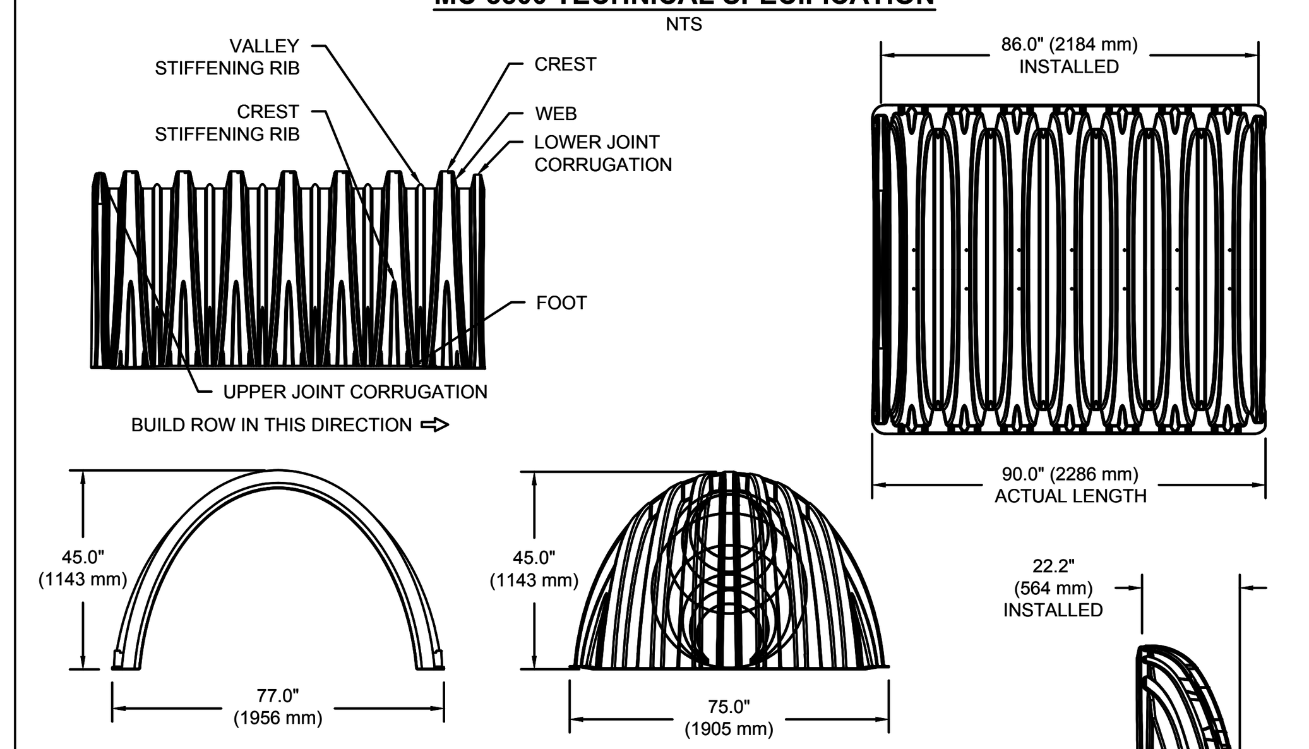


SHRUB PLANTING
NOT TO SCALE



PLANTING AND STAKING METHODS FOR DECIDUOUS TREES
NOT TO SCALE

MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

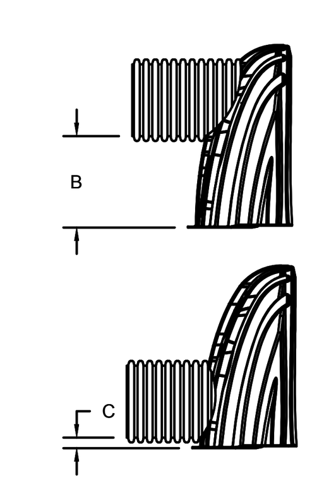
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

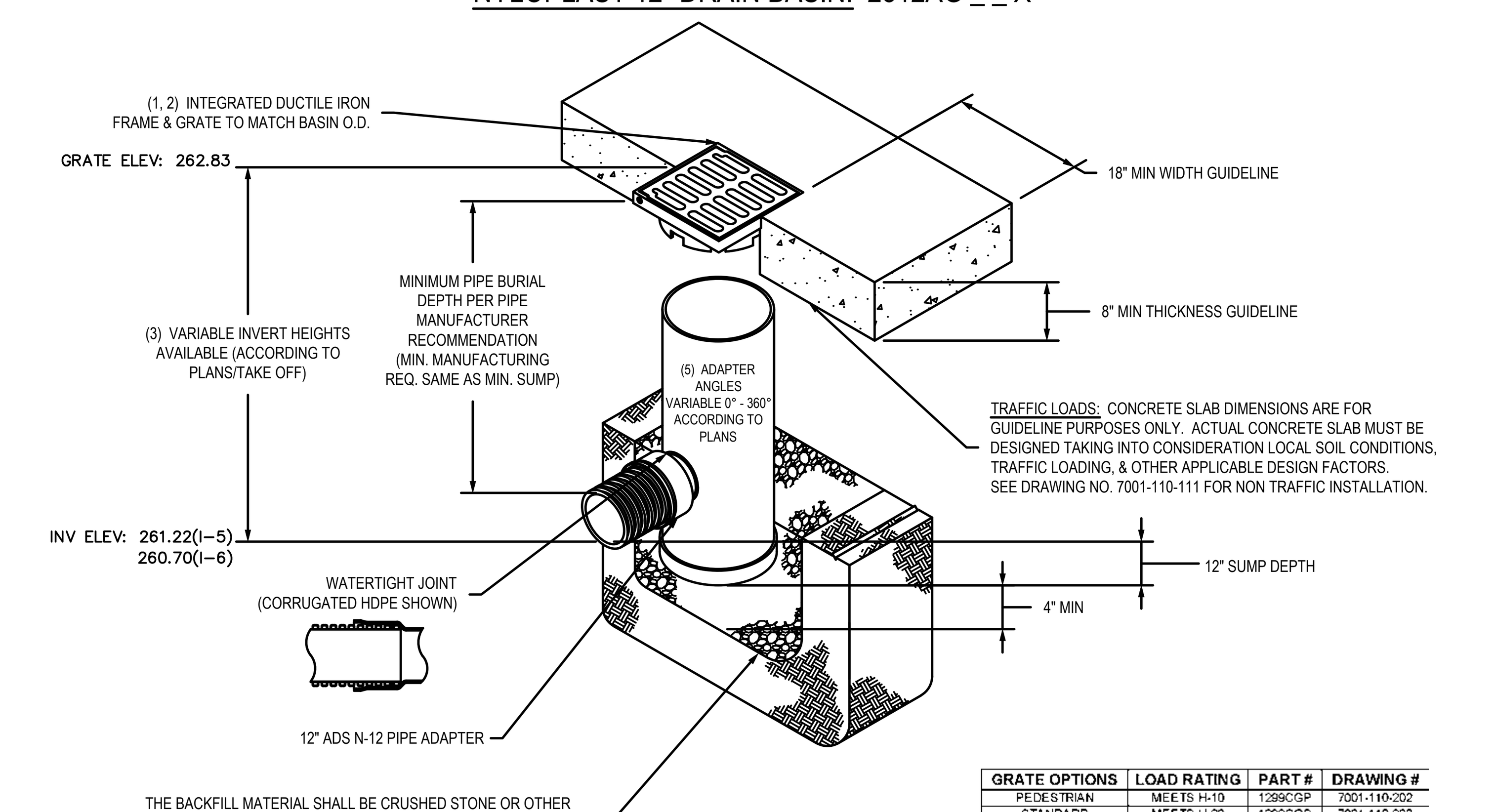
NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

TYPICAL STORMTECH MC-3500 INDIVIDUAL INFILTRATION CHAMBER DETAIL
NOT TO SCALE

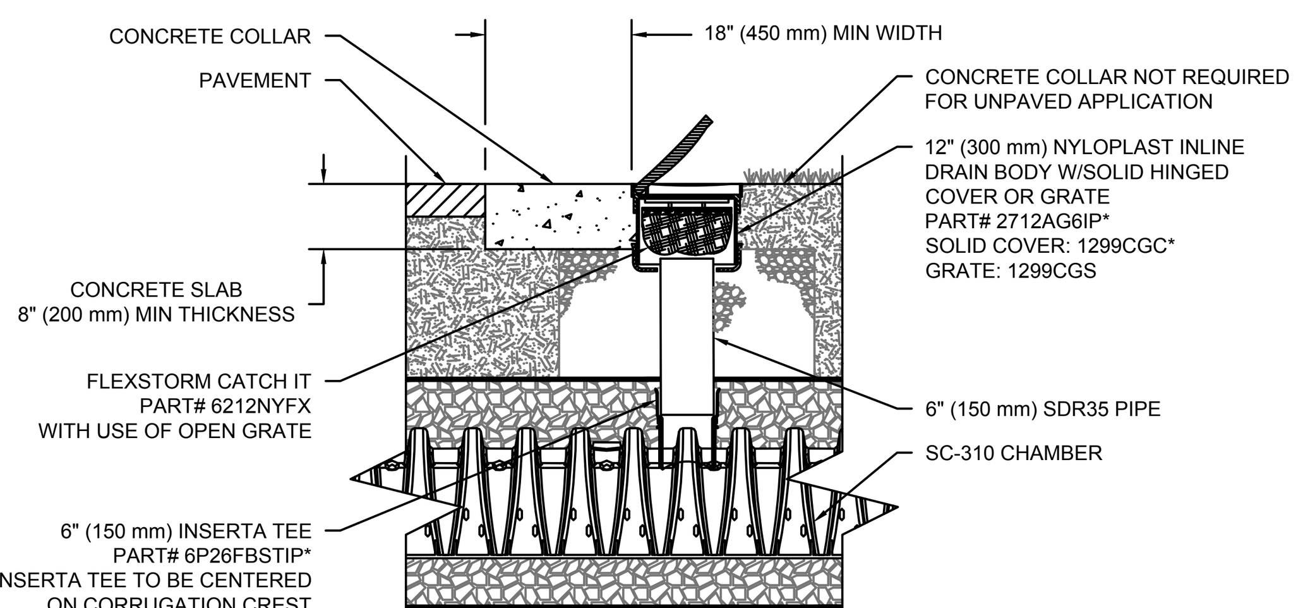
NYLOPLAST 12" DRAIN BASIN: 2812AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1299CGP	7001-110-202
STANDARD	MEETS H-20	1299CGS	7001-110-203
SOLID COVER	MEETS H-20	1299CGC	7001-110-204
PEDESTRIAN BRONZE	N/A	1299CGPB	7001-110-205
DOME	N/A	1299CGD	7001-110-206
DROP IN GRATE	LIGHT DUTY	1201DI	7001-110-021

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-29-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 03-11-16			
DWG SIZE A	SCALE 1:20 SHEET 1 OF 1	DWG NO. 7001-110-189	REV E



* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

NOTES: BASIN SHALL HAVE A MINIMUM OF 4 CLEANOUTS EVENLY DISPERSED THROUGHOUT THE BASIN FOOTPRINT.

SC-310 6" INSPECTION PORT DETAIL
NTS

SHADE TREES AND LANDSCAPING NOTES

1. THE TREES SHALL BE NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE LOCALITY OF THE PROJECT.
2. ALL TREES SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY AND VIGOROUS; THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
3. THE CALIPER OF THE TRUNK, MEASURED AT A HEIGHT OF SIX (6) INCHES ABOVE FINISHED GRADE, SHALL BE A MINIMUM OF TWO (2) INCHES.
4. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE INCLUDING PROPER GUYING AND STAKING.
5. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING OF TREES SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60, 1-1973, AS AMENDED.
6. LANDSCAPING PLAN SHALL INCLUDE FURNISHING AND INSTALLING MULCHED BEDS AND PLANT MATERIALS SHOWN ON THE LANDSCAPING SCHEDULE AND COMPLYING WITH THE LANDSCAPING NOTES AND PLANTING DETAILS.
7. PLANT MATERIAL SHALL COMPLY WITH ANSI Z60.1-1990. PLANT SIZES AND CONTAINER SIZES SHOWN ARE MINIMUM.
8. CONTRACTOR SHALL LABEL AT LEAST ONE (1) PLANT OF EACH VARIETY WITH A SECURED, ATTACHED TAG BEARING THE LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME TO HELP CONFIRM PLANT TYPE.
9. SUBSTITUTIONS, ADDITIONS, AND DELETIONS ARE PERMISSIBLE UPON APPROVAL FROM THE LANDSCAPE ARCHITECT AND MUNICIPALITY.
10. LANDSCAPING CONTRACTOR TO WARRANT LANDSCAPE PLANTS FOR A TWENTY-FOUR (24) MONTH PERIOD COMMENCING FIVE DAYS FROM THE DATE OF INSPECTION OF THE PLANT MATERIALS INSTALLATION. CONTRACTOR TO WARRANT ALL PLANTS AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. ALL PLANTS SHALL BE IN VIGOROUS AND THRIVING CONDITION AT THE END OF THE TWENTY-FOUR (24) MONTH PERIOD. FINAL INSPECTION OF THE SITE FOLLOWING THE TWENTY-FOUR (24) MONTH PERIOD WILL BE MADE AS DETERMINED BY THE TOWNSHIP ENGINEER OR HIS DESIGNEE. PLANTS FOUND TO BE IN POOR HEALTH OR LACKING NORMAL GROWTH HABIT DURING THE TWENTY-FOUR (24) MONTH GUARANTEE PERIOD SHALL BE REPLACED WITH NURSERY-GROWN PLANTS, IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN, WITHIN THIRTY (30) DAYS OF BEING NOTIFIED BY THE TOWNSHIP. IF NOTIFICATION IS MADE OUT OF SEASON, REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON. IF THE ORIGINAL PLANTS DECLINE, SUBSTITUTE SPECIES ACCEPTABLE TO THE TOWNSHIP ENGINEER AND SUITABLE FOR THE SITE'S ENVIRONMENTAL CONDITIONS OR PLANTING SCHEME MAY BE USED AND A REVISED LANDSCAPE PLAN SHALL BE FILED WITH THE TOWNSHIP ENGINEER AFTER INSTALLATION. ALL REPLACEMENT PLANTS SHALL BE SUBJECT TO A NEW TWENTY-FOUR (24) MONTH GUARANTEE PERIOD AND INSPECTIONS BY THE TOWNSHIP AS PRESCRIBED IN SUBSECTIONS 2 AND 3 ABOVE.
11. MULCH IS TO BE SHREDDED BARK. MULCH BED THICKNESS SHALL BE (THREE) 3 INCHES MINIMUM AFTER LIGHT TAMPING, EXCEPT THAT MULCH DEPTH AT ANNUAL FLOWERS SHALL BE 1-1/2". PLACE MULCH BED OVER WEED BARRIER MAT OR EQUAL, UNLESS NOTED OTHERWISE.
12. ALL LANDSCAPE PLANTING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ACCEPTED PRACTICES AS RECOGNIZED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. PLANTING AND MAINTENANCE OF VEGETATION SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, PROVISIONS FOR PRUNING, MULCHING, WEEDING, AND WATERING.
13. SHADE TREES SHALL HAVE A MINIMUM 8 FEET OF CLEAR TRUNK ABOVE FINISH GRADE.
14. THE APPLICANT GUARANTEES THAT ALL REQUIRED LANDSCAPE IMPROVEMENTS SHALL BE MAINTAINED IN A HEALTHY AND SOUND CONDITION, OR OTHERWISE BE REPLACED BY EQUIVALENT IMPROVEMENTS, FOR A PERIOD OF TWENTY-FOUR (24) MONTHS FOLLOWING TOWNSHIP INSPECTION / APPROVAL.
15. GROUND COVER SHRUBS, HERBACEOUS PERENNIALS, BULBS AND ANNUALS SHALL BE SPACED SO THAT 100 PERCENT OF THE BEDS ARE COVERED AFTER 2 YEARS GROWTH.
16. TREES AND SHRUBS SHALL BE PLANTED BETWEEN SEPTEMBER 1 AND NOVEMBER 15 OR MARCH 1 AND MAY 31.

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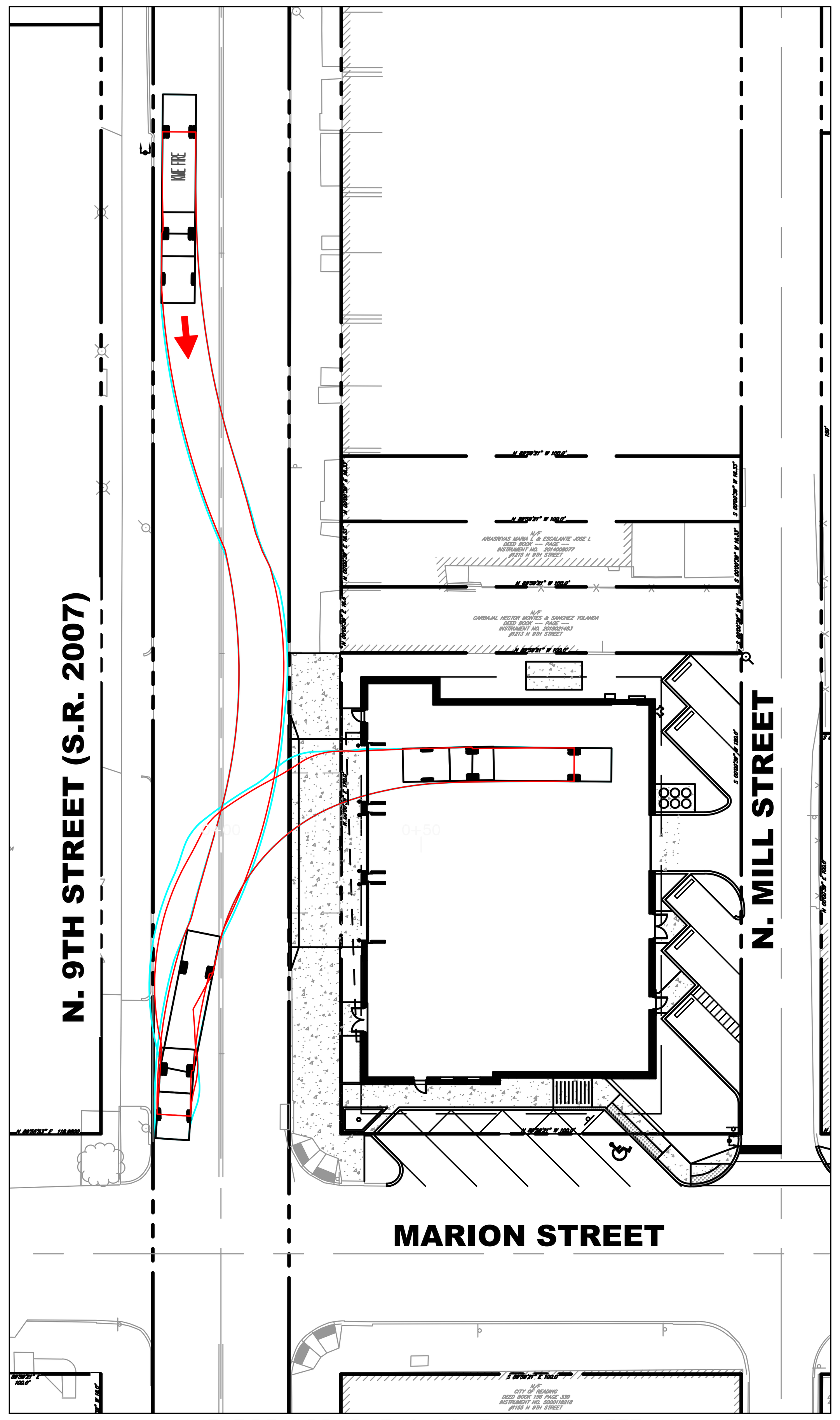
No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT
PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA
DETAILS

DRAWN BY: ARB | CHECK BY:
CADD FILE No. 1476-1 LD-DTL-2
DATE: 3-26-21 | JOB No.: 1476-1
SCALE: NOTED

SHEET
LD-9



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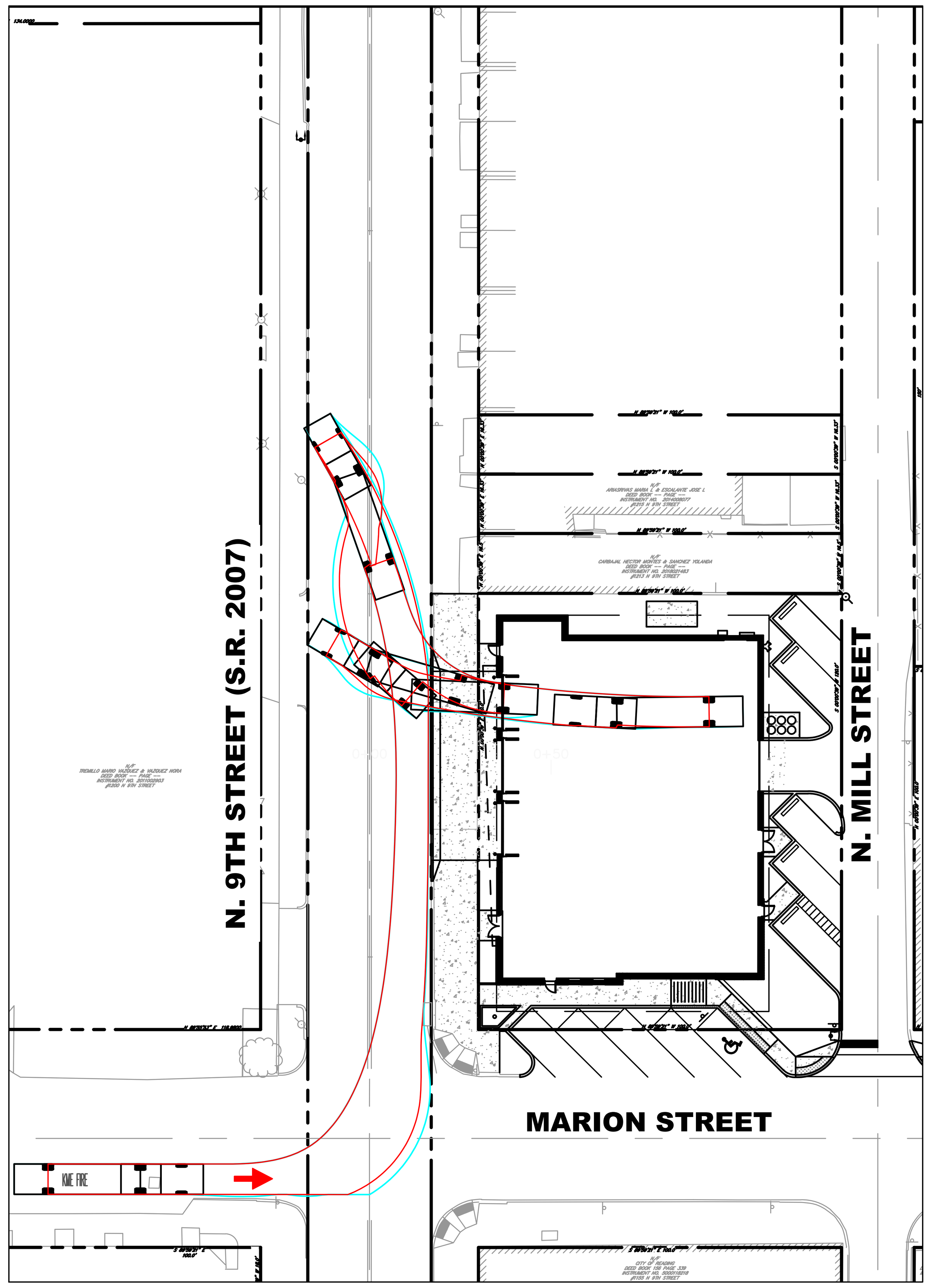

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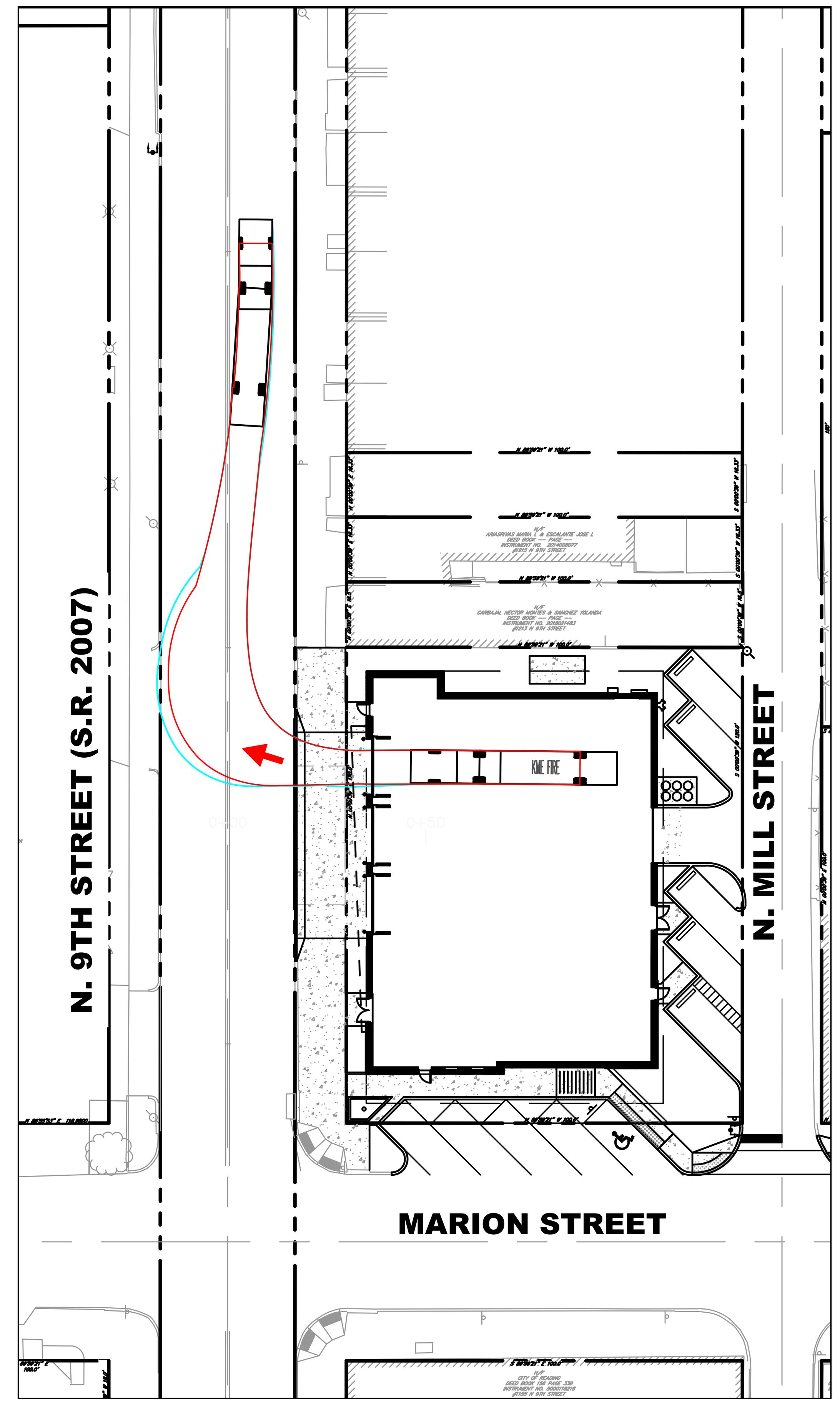

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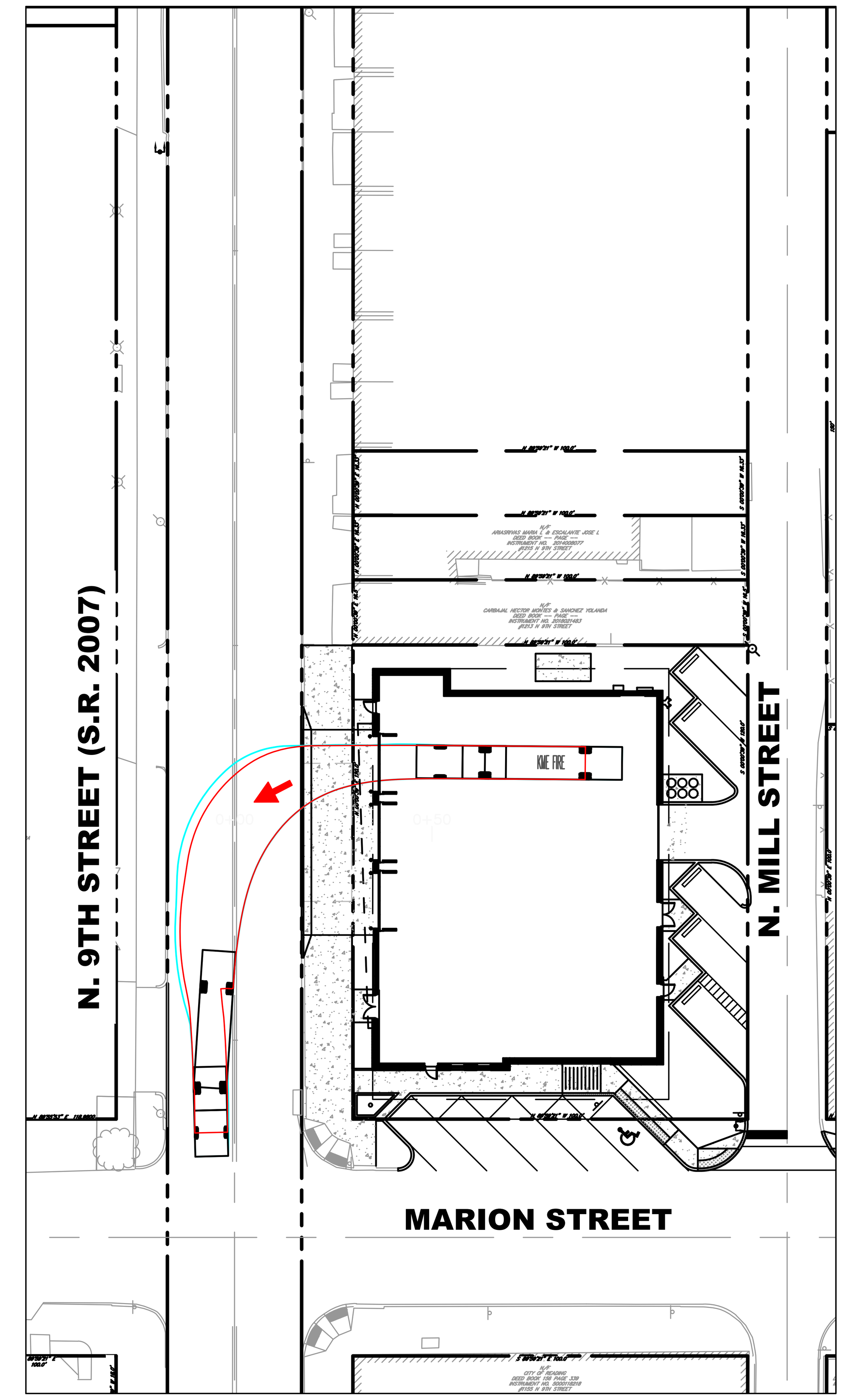

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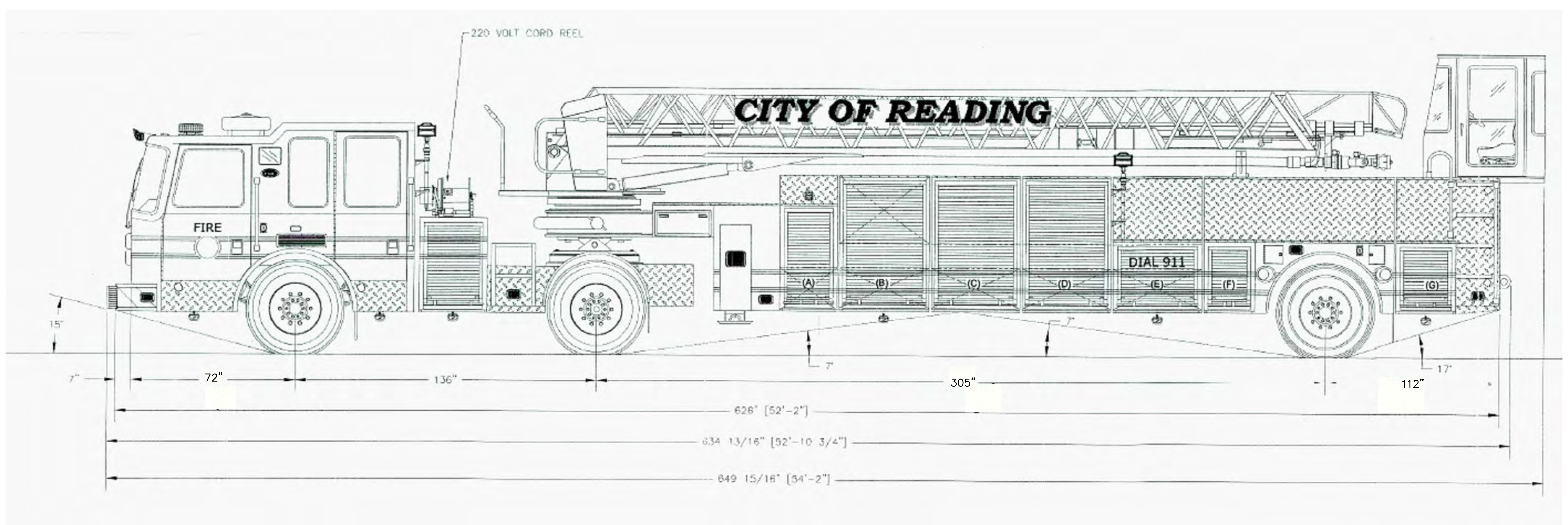

KME FIRE APPARATUS

GRAPHIC SCALE

30 0 30 60 90

SCALE 1" = 30'

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1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS

FOR

CITY OF READING

ON

1201 NORTH 9TH STREET

CITY OF READING BERKS COUNTY, PENNSYLVANIA

TURNING TEMPLATE

DRAWN BY: ARB	CHECK BY:
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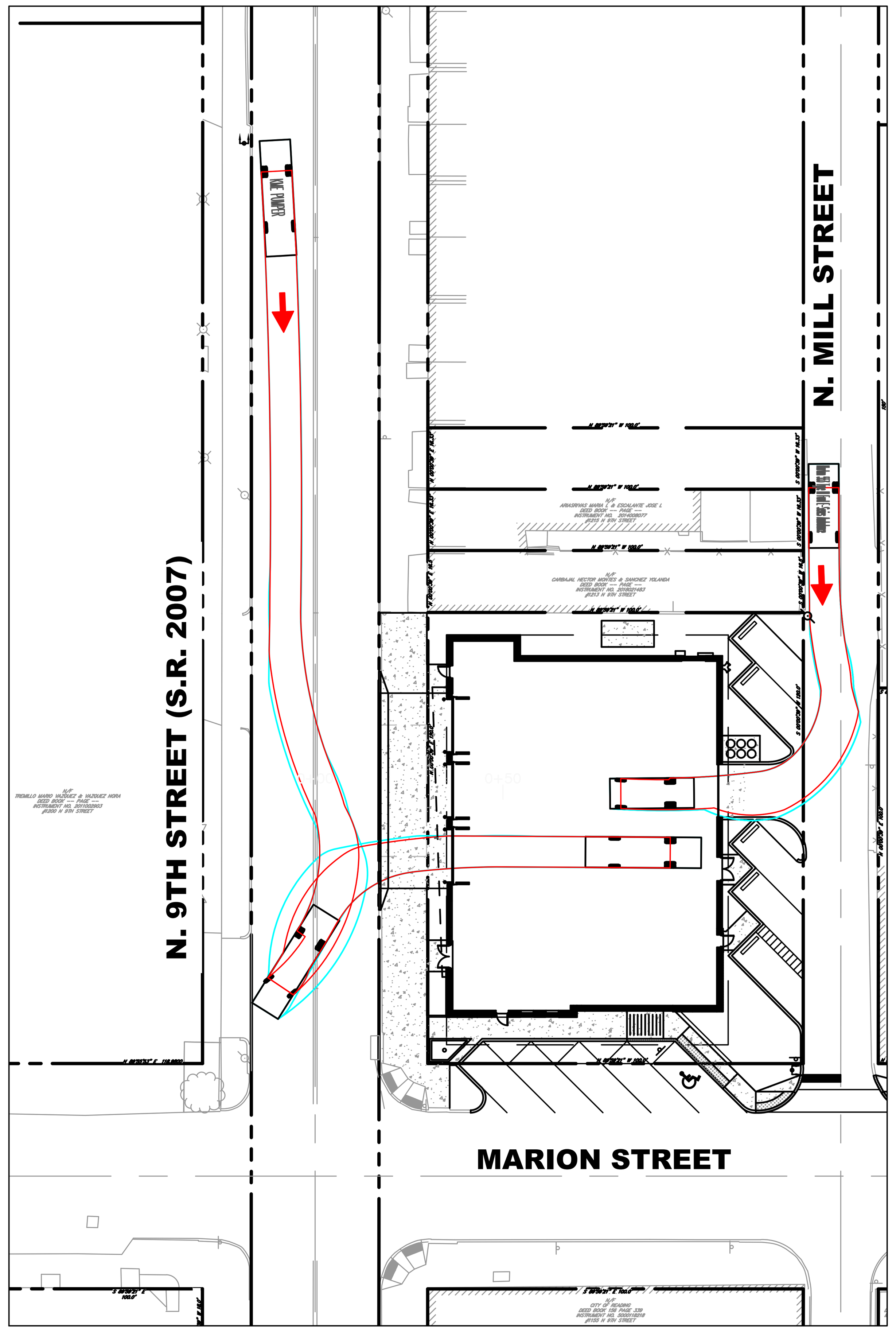
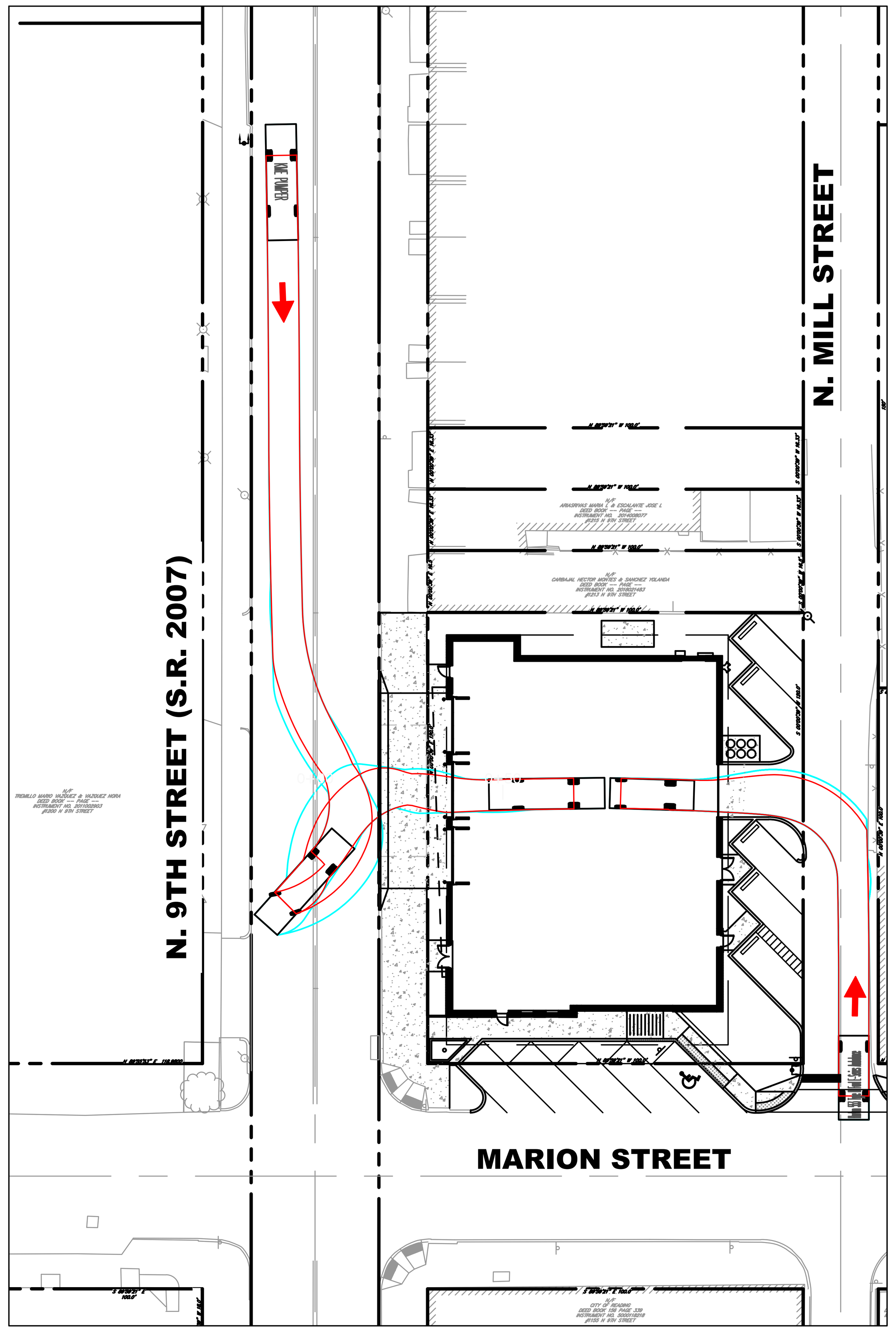
DATE: 3–26–21	JOB No.: 1476–1
SCALE: 1" =30'	

SHEET

LD–10



KME CUSTOM PUMPER SOUTHBOUND LEFT IN
AND AMBULANCE SOUTHBOUND RIGHT IN



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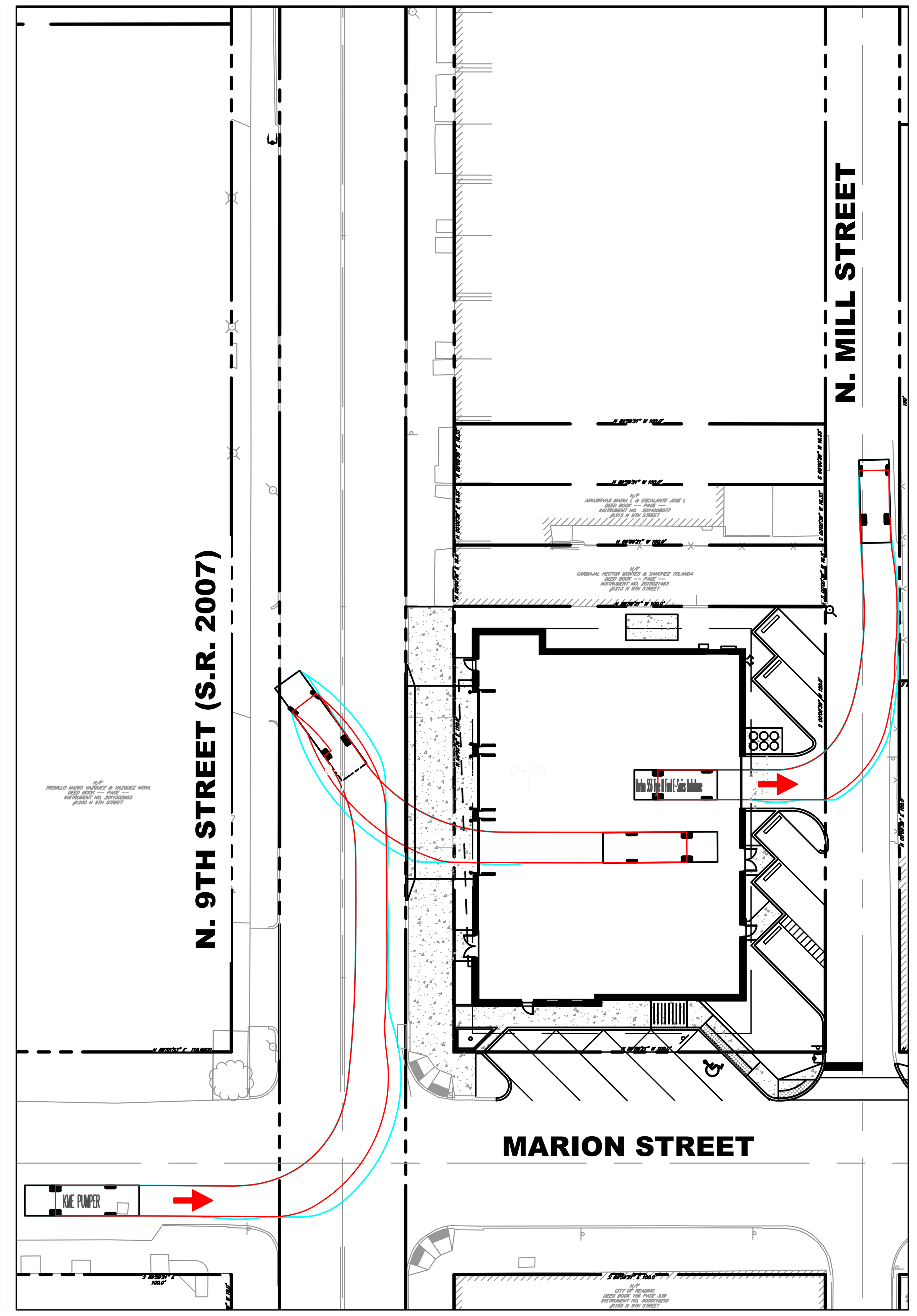
AND AMBULANCE NORTHBOUND LEFT IN



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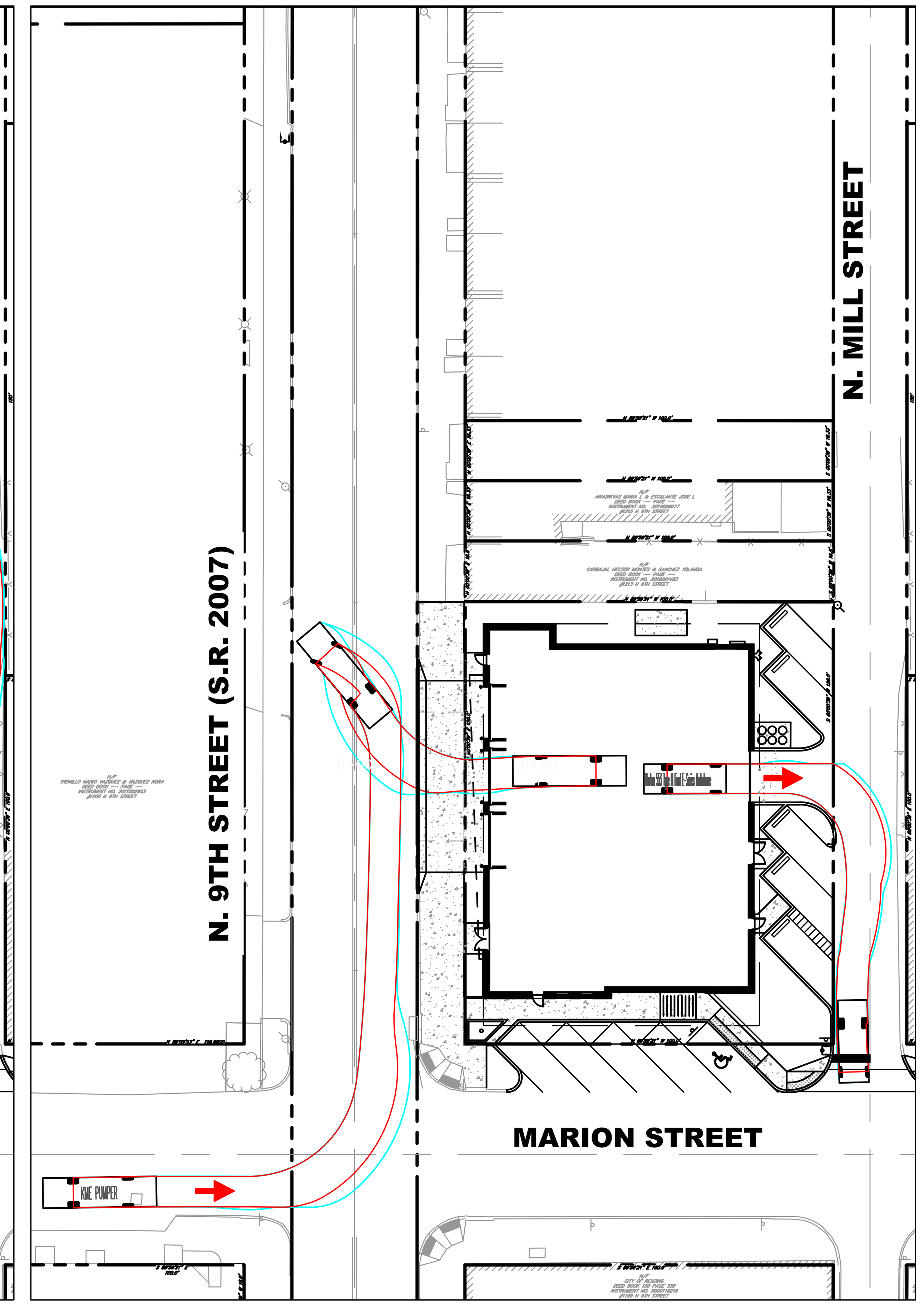
AND AMBULANCE NORTHBOUND LEFT OUT



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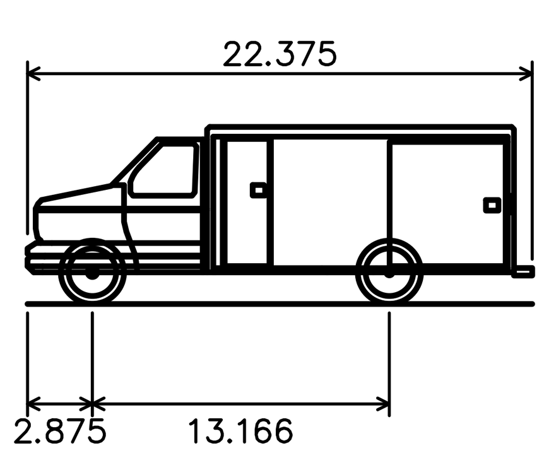
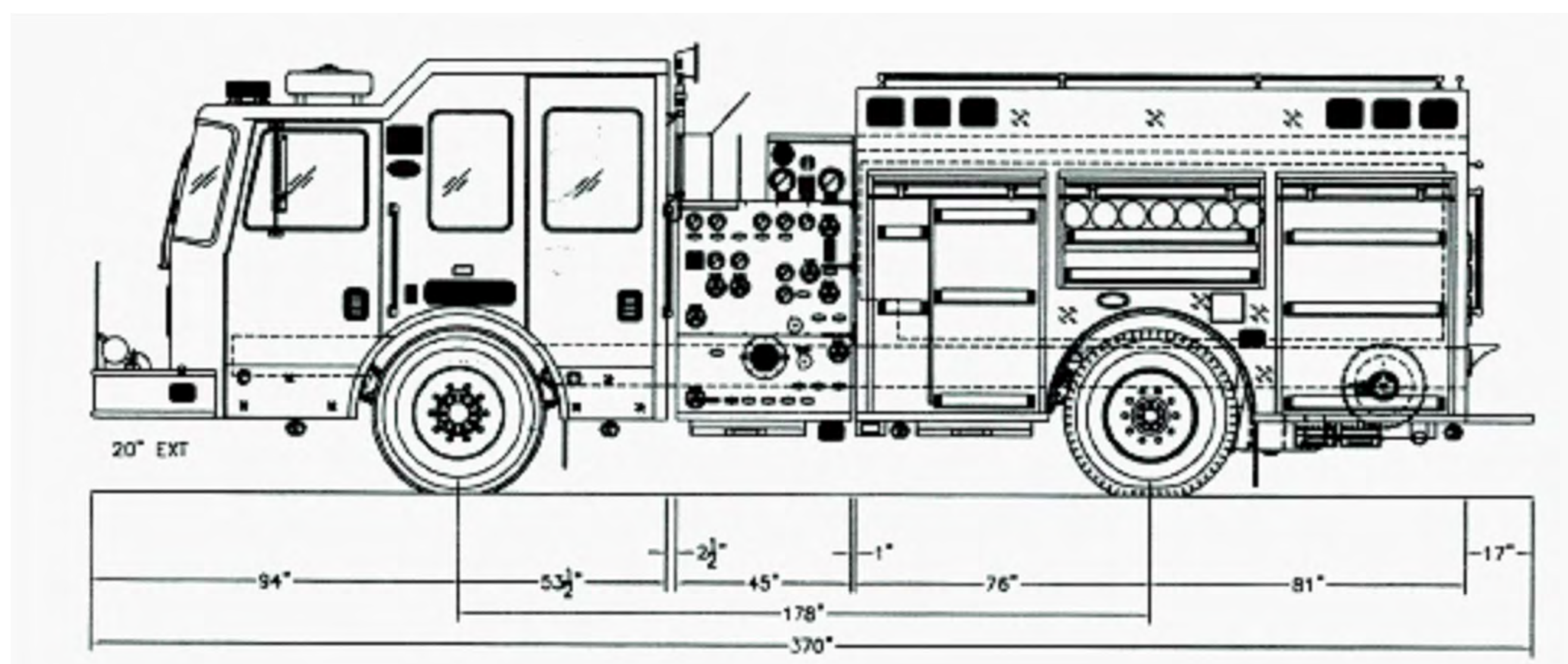
AND AMBULANCE SOUTHBOUND RIGHT OUT



HORTON 553 TYPE III FORD E-SERIES AMBULANCE

OVERALL LENGTH	22.375FT
OVERALL WIDTH	8.021FT
OVERALL BODY HEIGHT	7.853FT
MIN BODY GROUND CLEARANCE	1.265FT
TRACK WIDTH	8.021FT
LOCK-TO-LOCK TIME	5.00S
CURB TO CURB TURNING RADIUS	27.400FT



KME CUSTOM PUMPER

GRAPHIC SCALE

30 0 30 60 90

SCALE 1" = 30'

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MARION STREET STATION READING FIRE DEPARTMENT

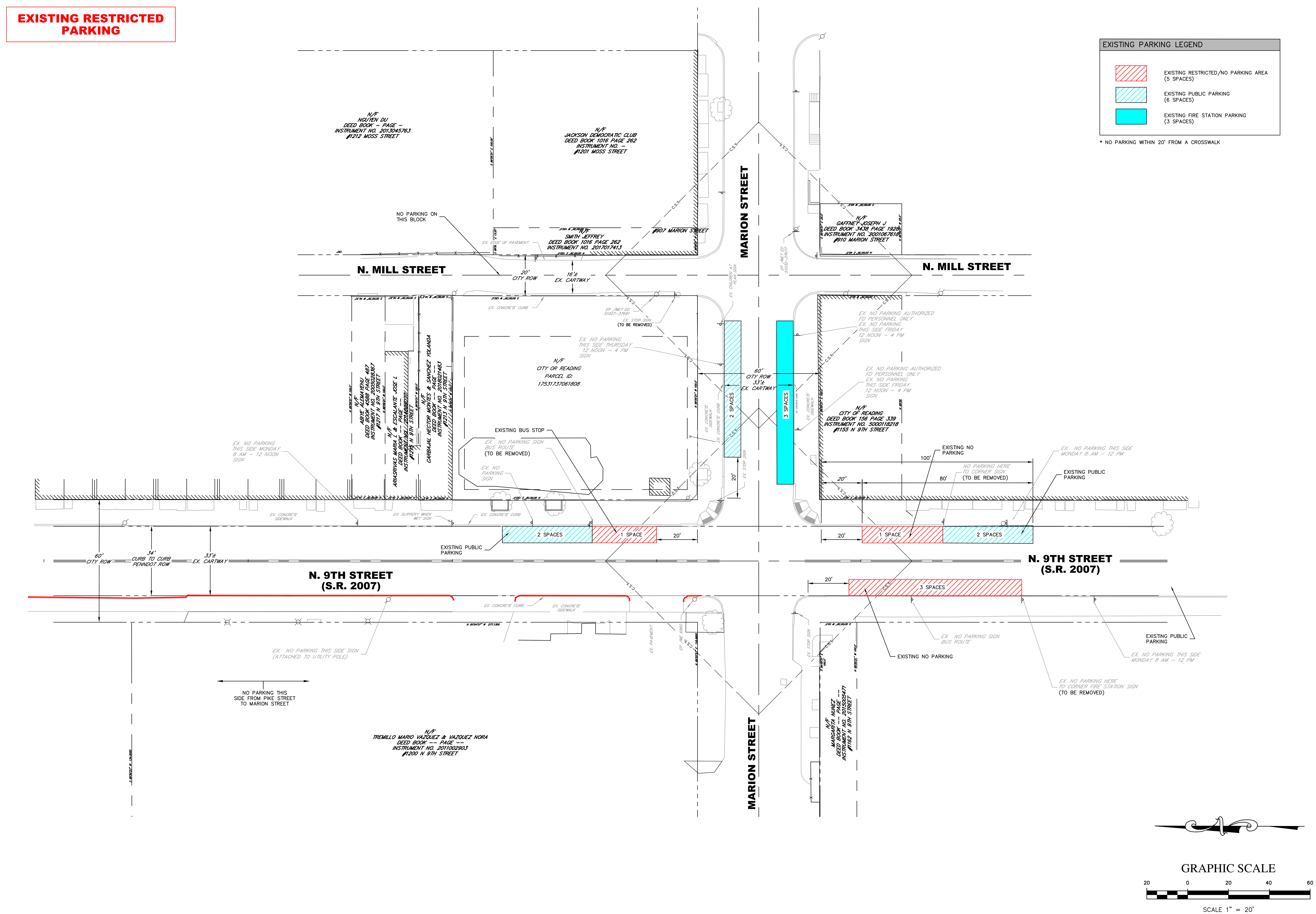
PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING — BERKS COUNTY, PENNSYLVANIA

TURNING TEMPLATE

DRAWN BY: ARB
CHECK BY: ✓
CADD FILE No.: 1476-1 LD AT2
DATE: 3-26-21
JOB No.: 1476-1
SCALE: 1" =30'

SHEET
LD-11



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PRELIMINARY–FINAL LAND DEVELOPEMENT PLANS
FOR
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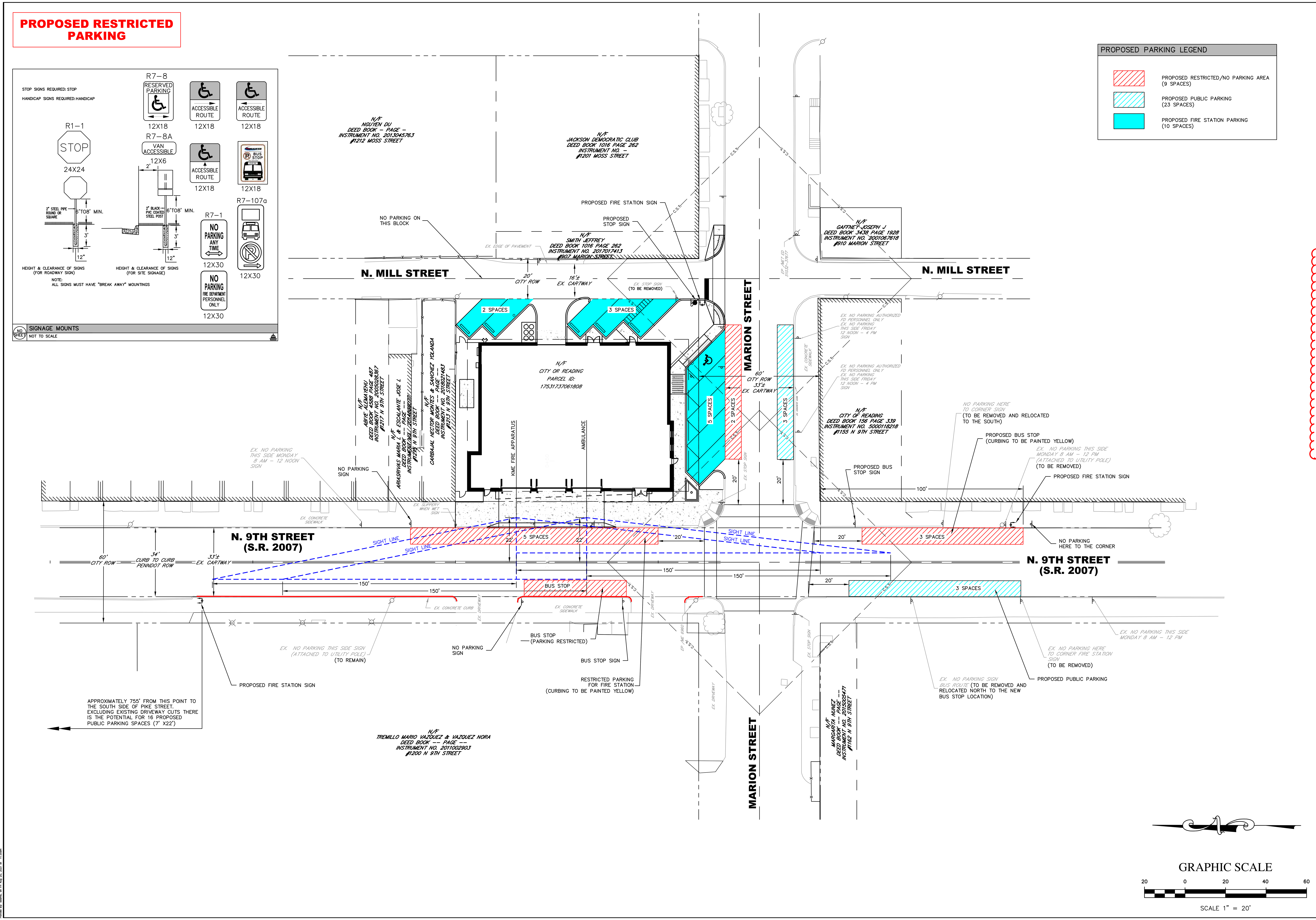
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

EXISTING PARKING EXHIBIT

DRAWN BY: ARB | CHECK BY:
CADD FILE No. 1476–1 LD–EXC PARKING
DATE: 3–26–21 | JOB No.: 1476–1
SCALE: 1"=20'

SHEET LD–12



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F:\Jobs\1476-1\B-Engineering\Land Dev\1476-1 LD- PR PARKING.dwg
Layout: LD-2
Plotted By: adamb, on Fri Aug 20, 2021 at 11:30am

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No.	DATE	REVISION	BY
4	8/20/21	REVISIONS PER CLIENT REQUEST DATED 8/19/21	ARB
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
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CITY OF READING
BERKS COUNTY, PENNSYLVANIA

PROPOSED PARKING EXHIBIT

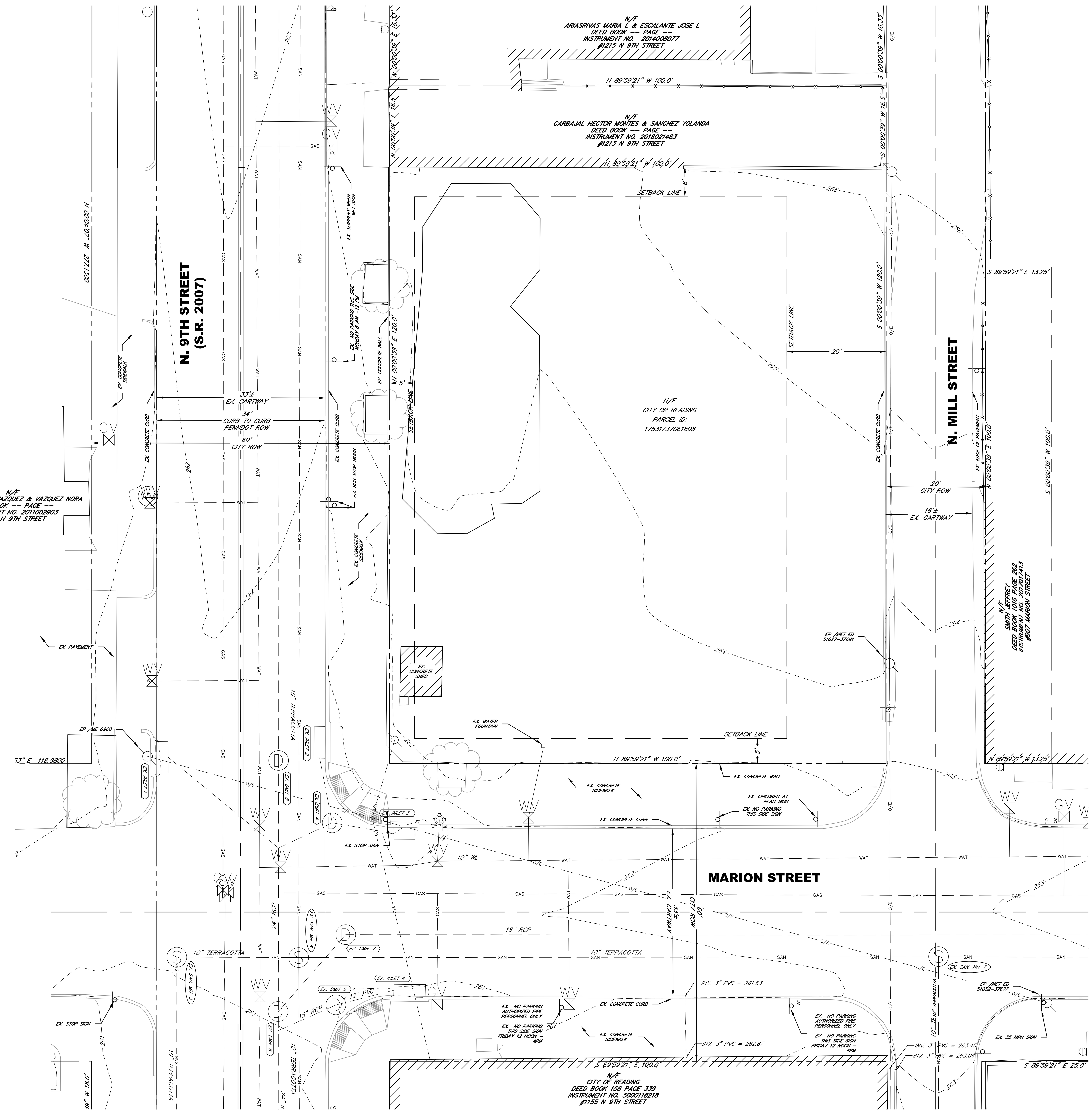
DRAWN BY:	CHECK BY:
ARB	

CADD FILE No.: 1476-1 LD- PR PARKING
DATE: 3-26-21
JOB No.: 1476-1
SCALE: 1"=20'

SHEET
LD-13

LEGEND

ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING OVERHEAD ELECTRIC	O/E
EXISTING UNDERGROUND ELECTRIC	U/E
EXISTING OVERHEAD TELEPHONE	O/T
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
EXISTING FENCE	X
EXISTING GUIDERAIL	
PROPERTY LINE	
RIGHT-OF-WAY	
ZONING BOUNDARY	
EXISTING TREE LINE	
EXISTING UTILITY POLE	
EXISTING GUY WIRE	
EXISTING ELECTRIC MANHOLE	E
EXISTING GAS MANHOLE	G
EXISTING SANITARY SEWER MANHOLE	S
EXISTING STORM DRAIN MANHOLE	D
EXISTING TELEPHONE MANHOLE	T
EXISTING WATER MANHOLE	W
EXISTING ELECTRIC BOX	E
EXISTING TELEPHONE BOX	T
EXISTING CABLE BOX	C
EXISTING GAS VALVE	GV
EXISTING GAS METER	
EXISTING WATER VALVE	WV
EXISTING FIRE HYDRANT	
EXISTING INLET	
EXISTING LIGHT POLE	
EXISTING STREET SIGN	



GRAPHIC SCALE

10 0 10 20 30

SCALE 1" = 10'

FIRST CAPITAL ENGINEERING

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No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING BERKS COUNTY, PENNSYLVANIA

EXISTING CONDITIONS PLAN

DRAWN BY: ARB | CHECK BY: ✓

CADD FILE No. 1476-1 PCSM EXC

DATE: 12-3-20 | JOB No.: 1476-1

SCALE: NOTED

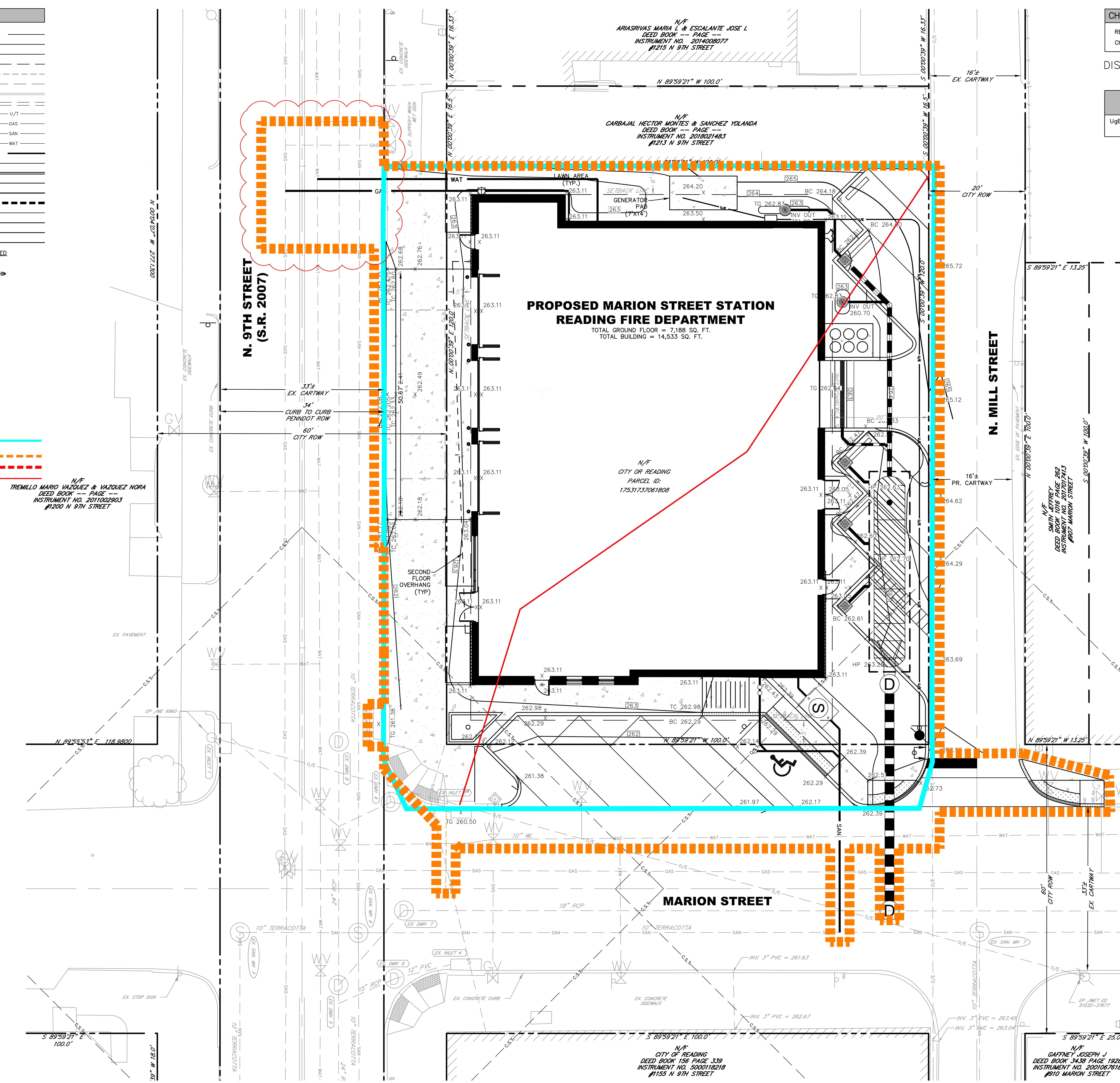
SHEET
PCSM-1

LEGEND

ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
PROPERTY LINE	
RIGHT-OF-WAY	
PROPOSED CURB	
PROPOSED GRADES	###
PROPOSED INDEX GRADES	###
PROPOSED DRAINAGE	
PROPOSED SANITARY SEWER	SAN
PROPOSED UNDERGROUND ELECTRIC	U/E
PROPOSED NATURAL GAS	GAS
PROPOSED WATER	WAT

	EXISTING	PROPOSED
UTILITY POLE		
GUY WIRE		
ELECTRIC MANHOLE	E	E
GAS MANHOLE	G	G
SANITARY SEWER MANHOLE	S	S
STORM DRAIN MANHOLE	D	D
TELEPHONE MANHOLE	T	T
WATER MANHOLE	W	W
GAS VALVE	GV	
GAS METER		
WATER VALVE	WV	
FIRE HYDRANT		
INLET		
LIGHT POLE		
STREET SIGN		

PRE-/POST-DEVELOPMENT DRAINAGE AREAS	
LIMIT OF DISTURBANCE	
NPDES PERMIT BOUNDARY	
TIME OF CONCENTRATION PATH	



CHAPTER 93 CLASSIFICATION

RECEIVING WATERCOURSE: SCHUYLKILL RIVER

CHAPTER 93 CLASSIFICATION: WWF

DISTURBED AREA – 0.41 ACRES

SOIL TYPE	HYDROLOGIC SOIL GROUP	AVG. SLOPE	BEDROCK DEPTH	DEPTH TO SEASONAL WATER TABLE
UgB – URBAN LAND	D	0–8%	–	–

GRAPHIC SCALE

SCALE 1" = 10'

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No.	DATE	REVISION	BY
4	8/20/21	REVISIONS PER CLIENT REQUEST DATED 8/19/21	ARB
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
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1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS FOR CITY OF READING ON 1201 NORTH 9TH STREET

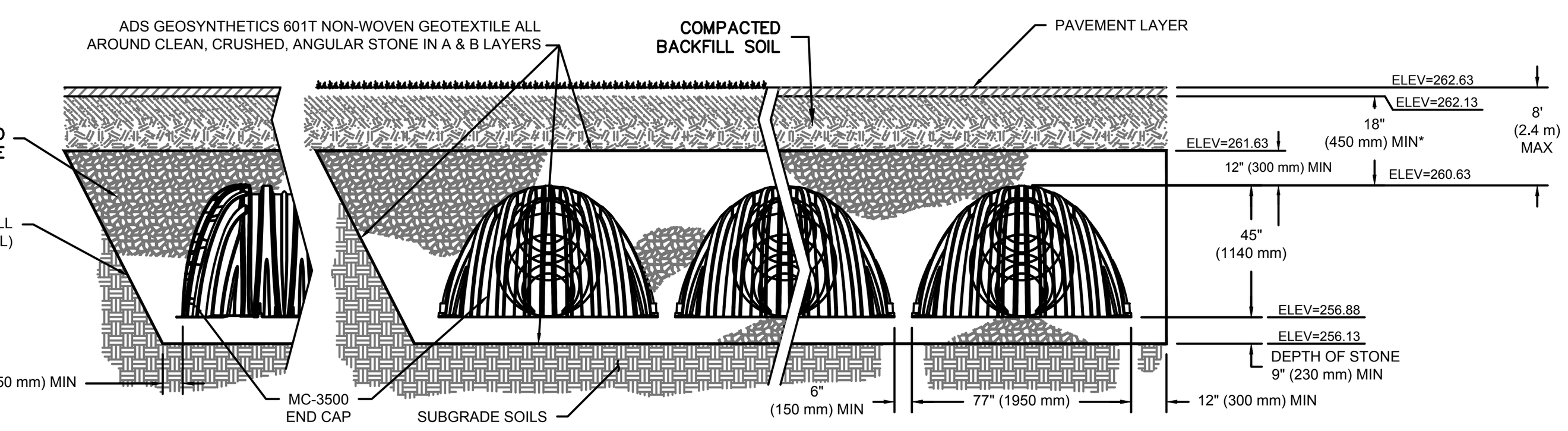
CITY OF READING, BERKS COUNTY, PENNSYLVANIA

POSTCONSTRUCTION STORMWATER MANAGEMENT PLAN

DRAWN BY: ARB	CHECK BY:
CADD FILE No. 1476-1 PCSM GRD	
DATE: 12-3-20	JOB No.: 1476-1
SCALE: NOTED	

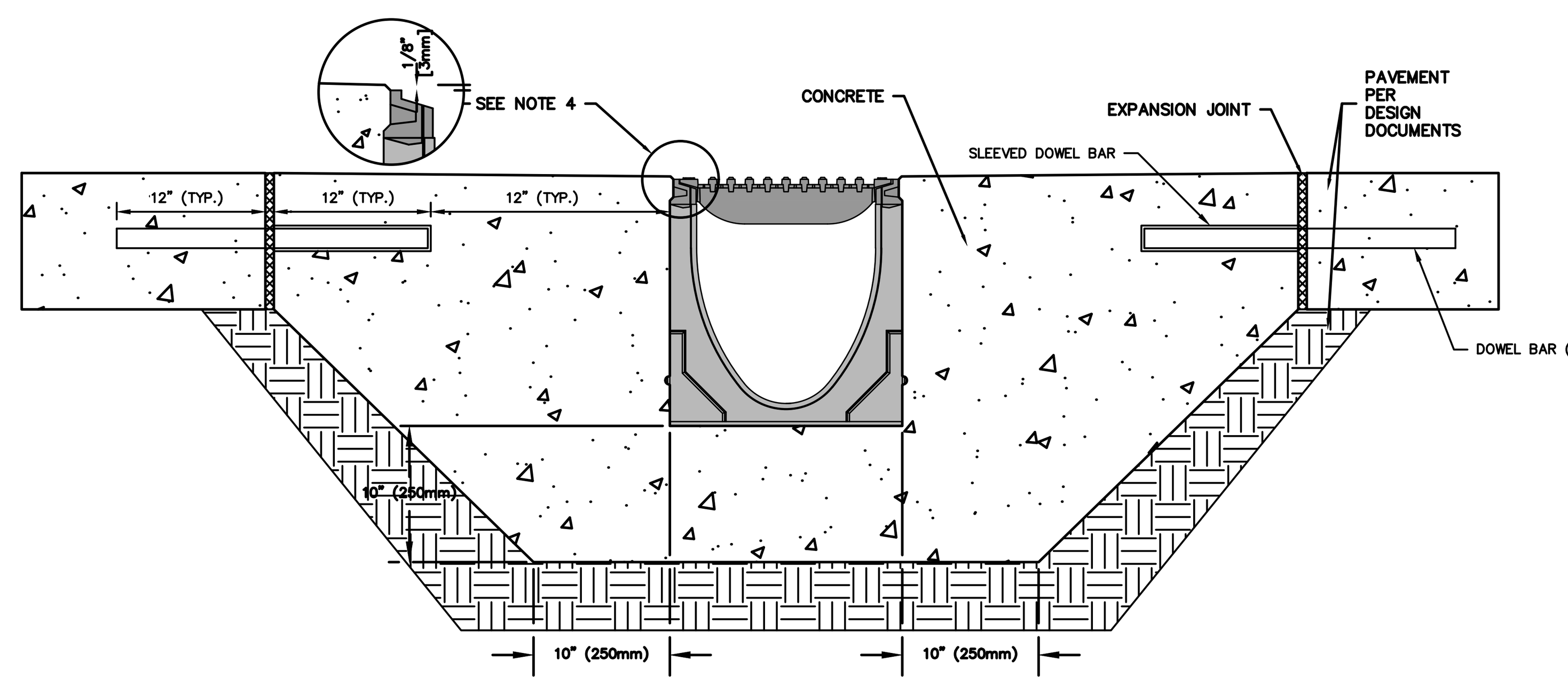
SHEET

PCSM-2



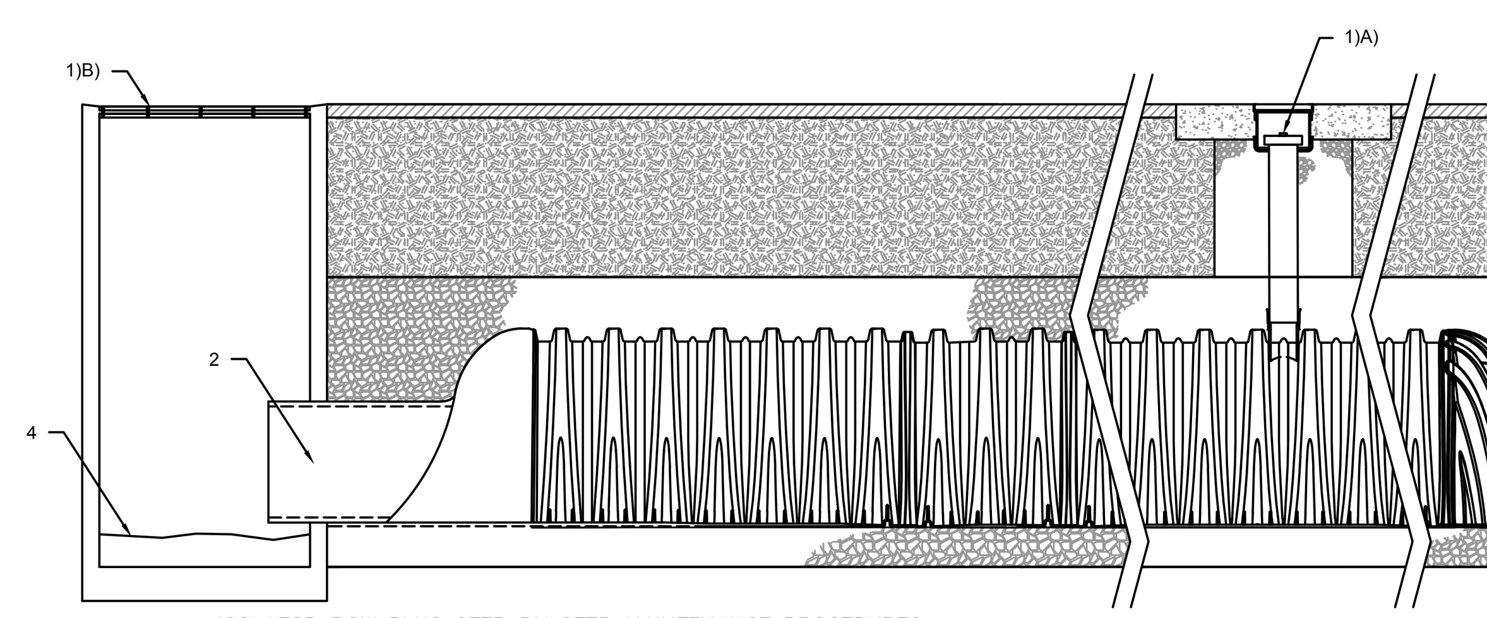
NOTES:
1. STORMTECH INFILTRATOR SYSTEM TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMENDATIONS. REFER TO STORMTECH'S DESIGN MANUAL. FOR STORMTECH INFORMATION CALL 1-888-892-2694.
2. REFER TO SITE PLANS FOR SPECIFIC SYSTEM LAYOUT AND CONFIGURATION.
3. IF SATURATED SUB-GRADE CONDITIONS ARE ENCOUNTERED, CONTRACTOR SHOULD IMMEDIATELY CONTACT PROJECT ENGINEER.

TYPICAL CROSS SECTION FOR STORMTECH MC-3500 INFILTRATION CHAMBER SYSTEM
NOT TO SCALE



NOTES:
1. TRENCH DRAIN TO BE ACO POWERDRAIN S200K LOAD CLASS E OR APPROVED EQUAL.
2. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS.
3. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
4. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND.
5. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

TRENCH DRAIN INSTALLATION DETAIL
NOT TO SCALE



ISOLATOR ROW PLUS STEP BY STEP MAINTENANCE PROCEDURES

STEP 1
INSPECT ISOLATOR ROW PLUS FOR SEDIMENT.
A. INSPECTION PORTS (IF PRESENT)
•REMOVE LID FROM FLOOR BOX FRAME
•REMOVE CAP FROM INSPECTION RISER
•USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD RESULTS ON MAINTENANCE LOG.
•IF SEDIMENT IS AT OR ABOVE 3 INCH DEPTH, PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
B. ALL ISOLATOR ROW PLUS
•REMOVE COVER FROM MANHOLE AT UPSTREAM END OF ISOLATOR ROW PLUS
•USING A FLASHLIGHT, INSPECT DOWN ISOLATOR ROW PLUS THROUGH OUTLET PIPE
•• MIRRORS ON POLES OR CAMERA MAY BE USED TO AVOID A CONFIDED SPACE ENTRY
•• FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
•IF SEDIMENT IS AT OR ABOVE THE LOWER ROW OF SIDEWALL HOLES (APPROX. 3 INCHES), PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2
CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
A. A FIXED FLOOR CLEANING NOZZLE WITH REAR FACING NOZZLE SPREAD OF 45 INCHES OR MORE IS PREFERABLE
B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
C. VACUUM MAHNOLE SUMP AS REQUIRED

STEP 3
REPLACE ALL CAPS, LIDS AND COVERS, RECORD OBSERVATIONS AND ACTIONS.

STEP 4
INSPECT AND CLEAN CATCH BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

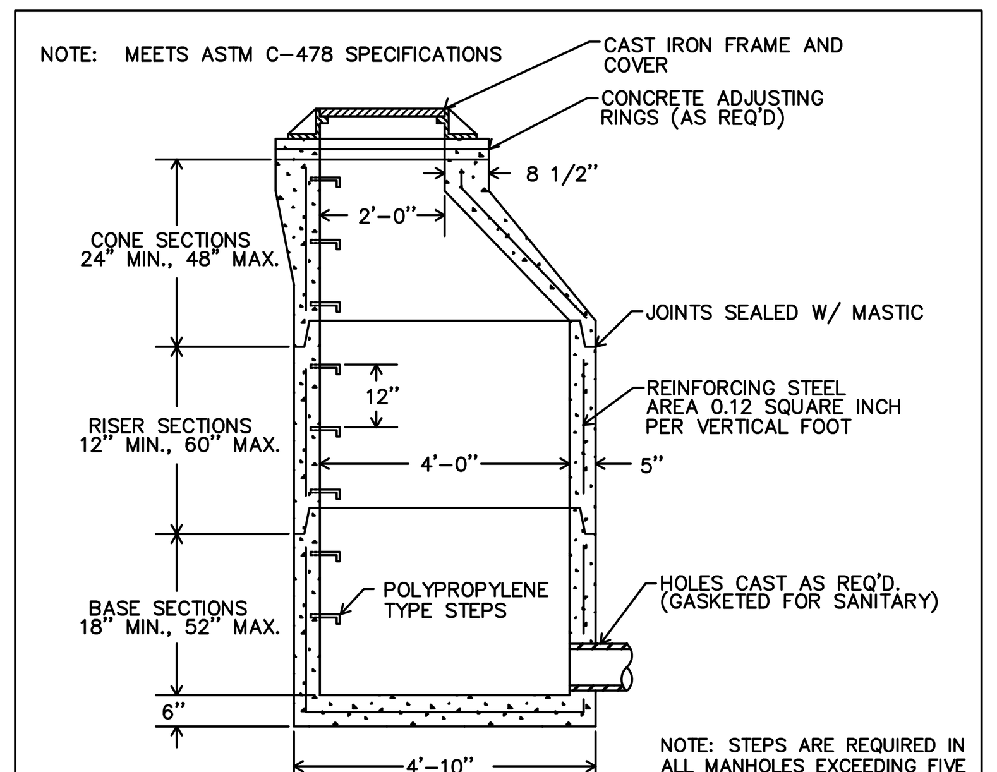
ADDITIONAL NOTES:
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACUUMING ONLY WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SAMPLE MAINTENANCE LOG

DATE	STADIA ROD READINGS		SEDIMENT DEPTH (1)-(2)		INSPECTOR
	FIXED POINT TO CHAMBER BOTTOM (1)	FIXED POINT TO TOP OF SEDIMENT (2)			
3/15/11	6.3 FT	NONE		NEW INSTALLATION. FIXED POINT IS CI FRAME AT GRADE	DJM
9/24/11		6.2	0.1 FT	SOME GRIT FELT	SM
6/20/13		5.8	0.5 FT	MUCKY FEEL, DEBRIS VISIBLE IN MANHOLE AND IN ISOLATOR ROW PLUS, MAINTENANCE DUE	NV
7/7/13	6.3 FT		0	SYSTEM JETTED AND VACUUMED	DJM

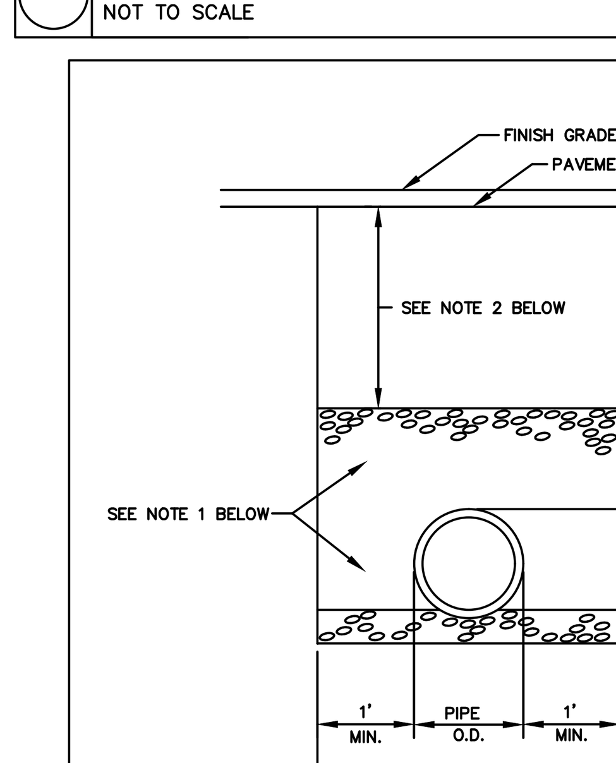
INSPECTION AND MAINTENANCE DETAIL
NOT TO SCALE

NOTE: MEETS ASTM C-478 SPECIFICATIONS



NOTE: STEPS ARE REQUIRED IN ALL MANHOLES EXCEEDING FIVE FEET IN DEPTH.

PRECAST CONCRETE MANHOLE 4 FT. DIAMETER
NOT TO SCALE



BEDDING AND BACKFILL NOTES

1. BEDDING

MATERIALS FOR PIPE BEDDING AND BACKFILL SHALL BE AASHTO No.57 COARSE AGGREGATE.

2. BACKFILL

a. BACKFILL MATERIAL FOR TRENCHES IN TOWNSHIP ROADS SHALL BE CLEAN ACCEPTABLE EARTH MATERIAL FREE OF OBJECTIONABLE MATERIALS AND ROCKS OVER 6" IN ANY DIMENSION. BACKFILL TO BE PLACED IN 6" LOOSE LIFTS AND TO BE COMPACTED TO 95% SSD DENSITY.

b. No.57 BEDDING TO EXTEND FULL WIDTH OF PIPE REMOVAL/PIPE INSTALLATION TRENCH WITHIN THE CARTWAY AREA.

c. OUTSIDE THE CARTWAY AREA, BEDDING IS TO EXTEND A MINIMUM OF 1' AS SHOWN. ADDITIONAL TRENCH WIDTH IS TO BE CLEAN ACCEPTABLE EARTH AS PER NOTE 1 ABOVE.

d. BACKFILL IN PAVED AREAS SHALL BE 2-RC COARSE AGGREGATE COMPACTED TO 95% SSD DENSITY

TRENCH BEDDING AND BACKFILL REQUIREMENTS
NOT TO SCALE

SEEDING & STABILIZATION

THE CONTRACTOR SHALL PLACE TOPSOIL, TO A MINIMUM OF 6 INCHES, IN THOSE AREAS WHICH HAVE BEEN DISTURBED BY WORK.

IT SHALL BE RAKED AND TRIMMED TO TRUE LINES, AND SHALL BE FREE FROM UNSIGHTLY VARIATIONS. IF SEEDING IS NOT POSSIBLE, SWALES AND ALL OTHER DISTURBED AREAS THAT WOULD NORMALLY BE SEEDED MUST BE COVERED WITH JUTE MATTING UNTIL SEEDING IS EFFECTIVE.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON GERMINATION PERIODS. MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

TEMPORARY SEEDING

1. SEEDBED PREPARATION – LOOSEN UPPER 3 INCHES BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS.
2. SEEDING – FOR THE PERIOD OF MARCH 1 THRU OCTOBER 31 APPLY 10 LBS./1,000 SQ. YDS. "FAST GROW" ANNUAL RYEGRASS AND FOR THE PERIOD OF NOVEMBER 1 THRU FEBRUARY 28 APPLY 10 LBS./1,000 SQ.YDS. WINTER RYEGRASS.
3. APPLY LIME, FERTILIZER, AND MULCH AS FOLLOWS: PULVERIZED AGRICULTURAL LIMESTONE, 1 TON/ACRE; 5-5-5 COMMERCIAL ANALYSIS FERTILIZER, 1,000 lbs/ACRE
4. MULCHING –CLEAN HAY OR STRAW. APPLY MULCH UNIFORMLY AT A MINIMUM RATE OF 3 TONS/ACRE FOR TEMPORARY AND PERMANENT SEEDING. PROPERLY ANCHOR THE MULCH. MULCHING MUST ALSO BE PROVIDED FOR THE STABILIZATION OF DISTURBED AREAS DURING THE NON-GROWING SEASON.

PERMANENT SEEDING & MULCHING

1. SITE PREPARATION

1.1. INSTALL EROSION CONTROL PRACTICES SHOWN ON PLAN.

1.2. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, ANCHORING AND MAINTENANCE.

2. SEEDBED PREPARATION

FLAT AREAS AND SLOPES UP TO 3 TO 1 GRADE SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 2 INCHES. THE TOP LAYER OF SOIL SHALL BE LOOSENED BY RAKING, DISCING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

3. SOIL AMENDMENTS

APPLY 4 TONS/ACRE OF PULVERIZED AGRICULTURAL LIMESTONE, 1000 LBS/ACRE. OF 10-20-20 COMMERCIAL ANALYSIS FERTILIZER.

4. SEEDING

SEED MIXTURE	%BY WEIGHT	MINIMUM % PURITY	MINIMUM % GERMINATION
MARQUIS KENTUCKY BLUEGRASS	50	98	85
RIVIERA PERENNIAL RYEGRASS	30	95	85
PENNLAWN RED FESCUE	20	98	85

WHENEVER SEEDING IS TO BE DONE ON SLOPES STEEPER THAN 3:1, SEED MIXTURES SHOULD BE SELECTED THAT ARE APPROPRIATE FOR STEEP SLOPES. TABLE 4 IN THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND AND TABLE A (SECTION 804.2(b)) IN PADOT PUBLICATION 208 IDENTIFY SEED MIXTURES SUITABLE FOR STEEP SLOPE CONDITIONS.

PA DOT FORMULA D IN AREAS OF THE STORMWATER DETENTION BASIN.

APPLY SEED AT A MINIMUM OF 20 LBS. PER 1,000 S.Y. SPECIFIC SEED MIX TO BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PERMANENT SEEDING TO BE DONE BETWEEN MARCH 15 AND OCTOBER 15 AND PREFERRED PERIODS ARE MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15.

NOTE: EQUIVALENT SEED MIXTURES AND APPLICATION RATES MAY BE USED PROVIDED THEY ARE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

5. MULCHING

CLEAN HAY OR STRAW. APPLY MULCH UNIFORMLY AT A MINIMUM RATE OF 3 TONS/ACRE FOR TEMPORARY AND PERMANENT SEEDING. PROPERLY ANCHOR THE MULCH. MULCHING MUST ALSO BE PROVIDED FOR THE STABILIZATION OF DISTURBED AREAS DURING THE NON-GROWING SEASON.

6. IRRIGATION

IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED, IF FEASIBLE. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON IN ABNORMALLY DRY OR HOT SEASONS OR ON ADVERSE SITES.

7. MAINTENANCE

7.1. IRRIGATION – IF SOIL MOISTURE BECOMES DEFICIENT, IRRIGATE TO PREVENT LOSS OF STAND OF PROTECTIVE VEGETATION, IF FEASIBLE.

7.2. REPAIRS – INSPECT ALL SEED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE.

7.2.1. IF STAND IS INADEQUATE FOR EROSION CONTROL, OVERSEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY APPLIED.

7.2.2. IF STAND IS OVER 60% DAMAGE, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS.

8. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSION CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.

9. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 271.1 et seq., AND 287.1 et seq. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, BURNED, DUMPED, OR DISCHARGED AT THE SITE

10. THE PERMITTEE AND CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT WHICH HAS A LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.

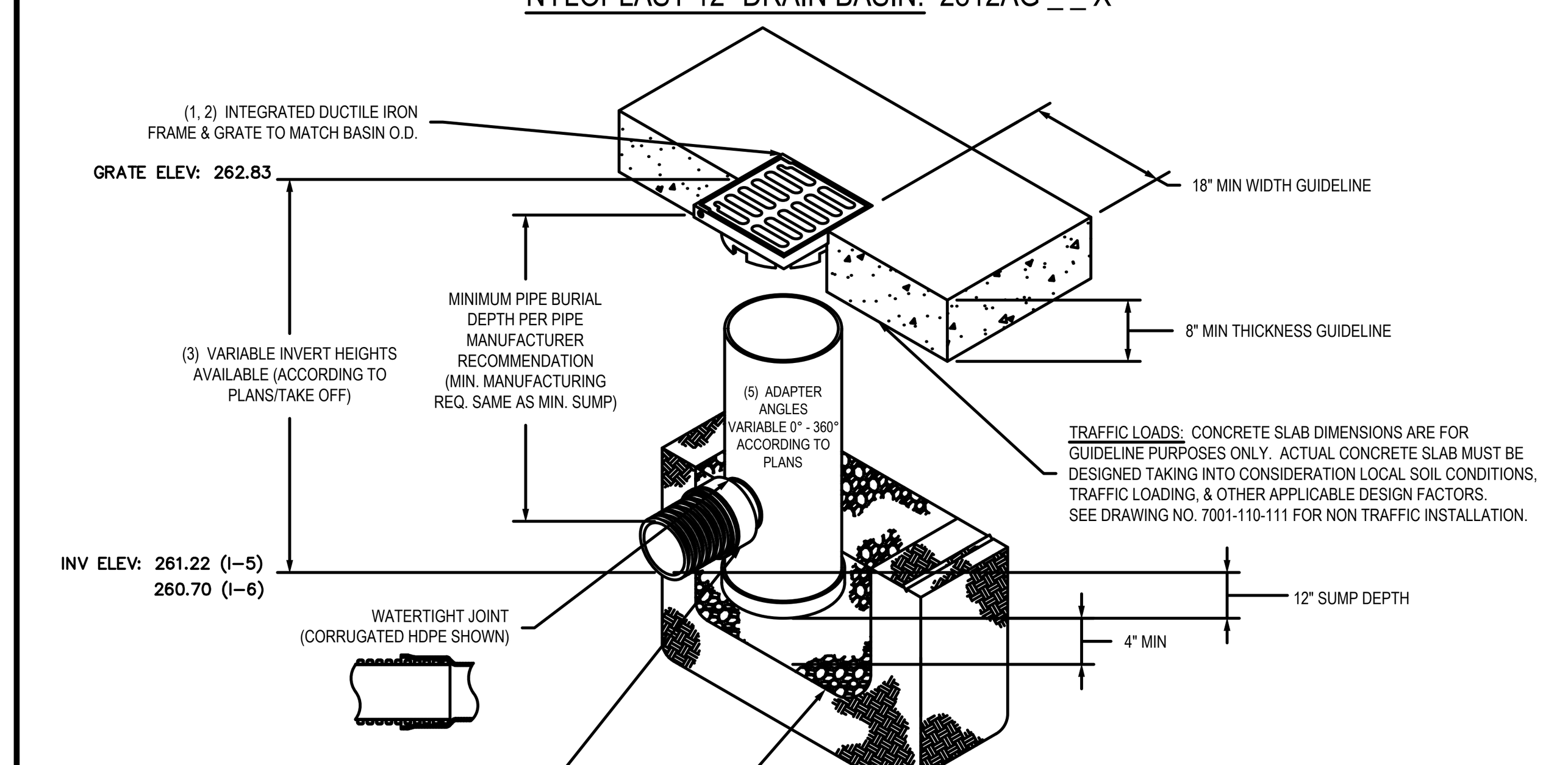
11. IF FUEL OR OTHER DANGEROUS CHEMICALS ARE STORED ON SITE, THEN A PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN MUST BE DEVELOPMENT AND KEPT ON SITE.

12. PRIOR TO THE COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES FOR ADDITIONAL PHASE OR PORTION OF THE PROJECT, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR EACH ADDITIONAL PHASE OR PORTION OF THE PROJECT FOR REVIEW AND AUTHORIZATION BY THE DISTRICT.

SEEDING AND SOIL SUPPLEMENTS TABLE (FROM SECTION 804.2(b), PADOT 408 MANUAL)

FORMULA AND SPECIES	% BY WEIGHT	MINIMUM % PURITY	MINIMUM % GERMINATION	MAX. % WEED SEED	SEEDING RATE LBS. PER 1000 SY
FORMULA D – MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15					21.0 TOTAL
• TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUCKY 31)	70	98	85	0.15	15.0
• CREEPING RED FESCUE OR CHEWINGS FESCUE	30	98	85	0.15	6.0

NYLOPLAST 12" DRAIN BASIN: 2812AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1299CGP	7001-110-202
STANDARD	MEETS H-20	1299CGS	7001-110-203
SOLID COVER	MEETS H-20	1299CGC	7001-110-204
PEDESTRIAN BRONZE	N/A	1299CGPB	7001-110-205
DOME	N/A	1299CGD	7001-110-206
DROP IN GRATE	LIGHT DUTY	1201DI	7001-110-321

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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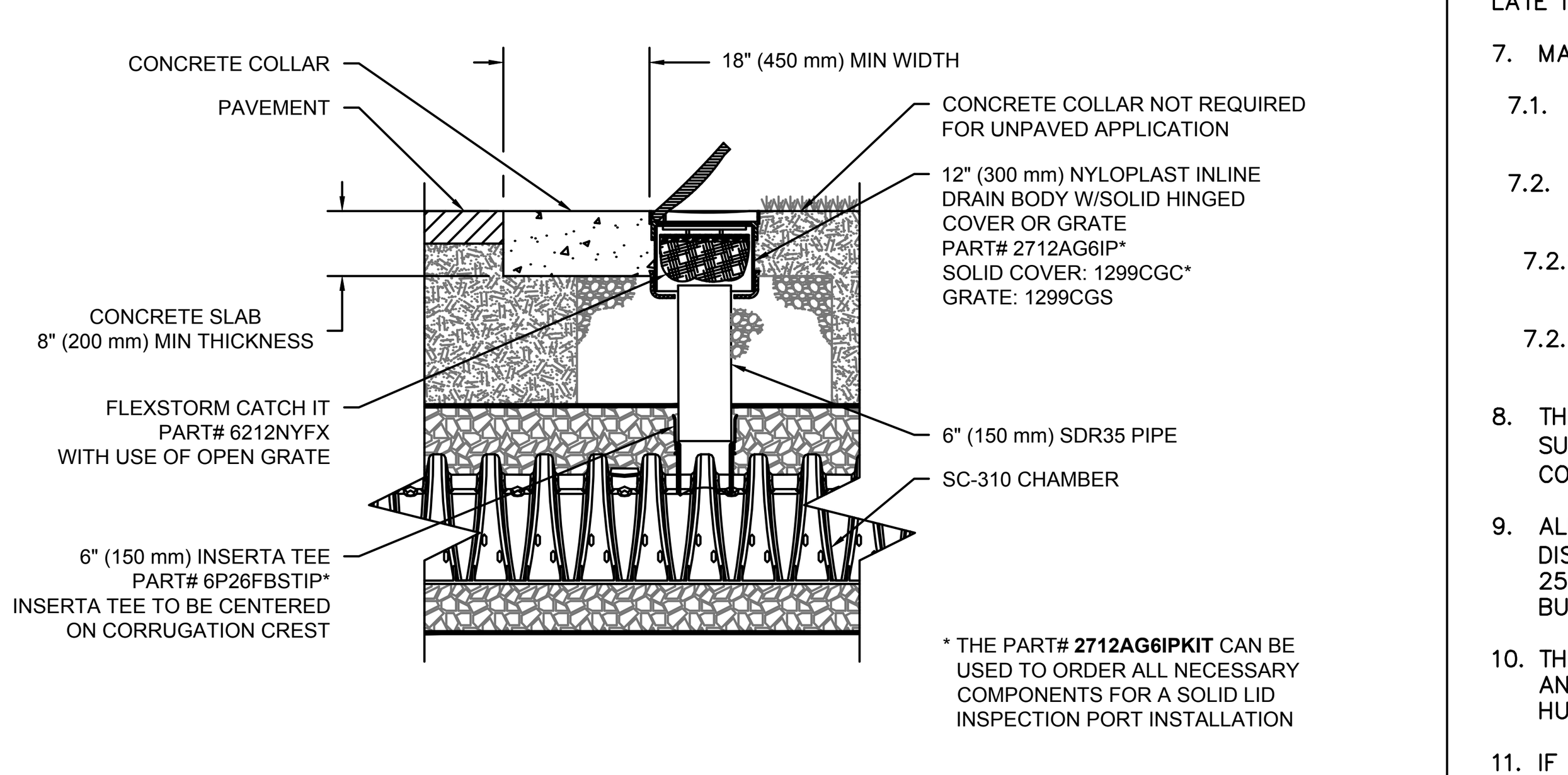
DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-29-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 03-11-16			
DWG SIZE A	SCALE 1:20 SHEET 1 OF 1	DWG NO. 7001-110-189	REV E



* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

SC-310 6" INSPECTION PORT DETAIL
NTS

STORMWATER BMP INSPECTION & MAINTENANCE SCHEDULE

ALL WASTES AND MATERIALS DEPOSITED IN AND REMOVED FROM POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BMP FACILITIES AND FROM IMPERVIOUS AREAS (EX. SWEEPING OF STREETS & PARKING LOTS) DURING OPERATION AND MAINTENANCE SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET.SEQ., 271.1., AND 287.1 ET. SEQ. NO WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

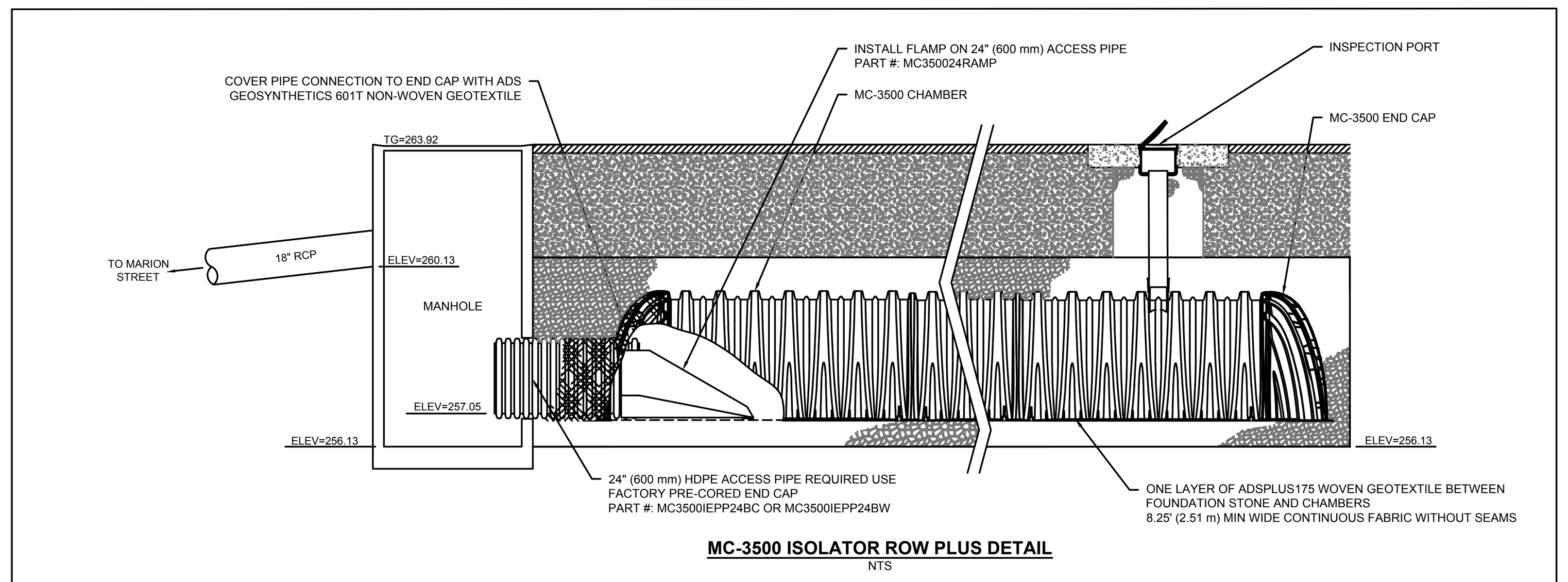
STORMTECH SUBSURFACE BASIN

CONSTRUCTION:

1. EXCAVATE THE BED AND PREPARE THE SUBGRADE. TRACKED EQUIPMENT SHOULD BE USED WHENEVER CONSTRUCTION TRAFFIC MUST OCCUR WITHIN THE BASIN FOOTPRINT. MAKE EVERY EFFORT TO WORK FROM OUTSIDE THE BASIN FOOTPRINT IN ORDER TO PREVENT COMPACTION.
2. PLACE NON-WOVEN GEOTEXTILE OVER PREPARED SOIL AND UP EXCAVATION WALLS.
3. PLACE CLEAN, CRUSHED, ANGULAR STONE FOUNDATION 9" THICK. COMPACT TO ACHIEVE A FLAT SURFACE.
4. INSTALL MANIFOLDS AND LAY OUT WOVEN SCOUR GEOTEXTILE AT INLET ROWS AT EACH INLET END CAP. PLACE A CONTINUOUS PIECE ALONG ENTIRE LENGTH OF ISOLATOR ROWS.
5. ALIGN THE FIRST CHAMBER AND END CAP OF EACH ROW WITH INLET PIPES.
6. CONTINUE INSTALLING CHAMBERS BY OVERLAPPING CHAMBER END CORRUGATIONS. CHAMBER JOINTS ARE LABELED "LOWER JOINT-OVERLAP HERE" AND "BUILD THIS DIRECTION – UPPER JOINT" BE SURE THAT THE CHAMBER PLACEMENT DOES NOT EXCEED THE REACH OF THE CONSTRUCTION EQUIPMENT USED TO PLACE THE STONE. MAINTAIN 9" SPACING BETWEEN ROWS.
7. LIFT THE END OF THE CHAMBER OFF THE GROUND TO PLACE THE END CAPS UNDER THE CHAMBER'S END CORRUGATION.
8. PLACE TWO CONTINUOUS LAYERS OF WOVEN FABRIC BETWEEN THE FOUNDATION STONE AND THE ISOLATOR ROW CHAMBERS, MAKING SURE THE FABRIC LAYS FLAT AND EXTENDS THE ENTIRE WIDTH OF THE CHAMBER FEET. DRAPE A STRIP OF NON-WOVEN GEOTEXTILE OVER THE ROW CHAMBERS.
9. INITIAL EMBEDMENT SHALL BE SPOTTED ALONG THE CENTERLINE OF THE CHAMBER EVENLY ANCHORING THE LOWER PORTION OF THE CHAMBER. THIS IS BEST ACCOMPLISHED WITH A STONE CONVEYOR OF EXCAVATOR REACHING ALONG THE ROW.
10. NO EQUIPMENT SHALL BE OPERATED ON THE BED WHILE CHAMBERS ARE BEING BACKFILLED.
11. INSTALL NON-WOVEN GEOTEXTILE OVER THE STONE. GEOTEXTILE MUST OVERLAP 24" MIN. WHERE EDGES MEET. COMPACT EACH LIFT OF BACKFILL AS SPECIFIED.

OPERATION AND MAINTENANCE:

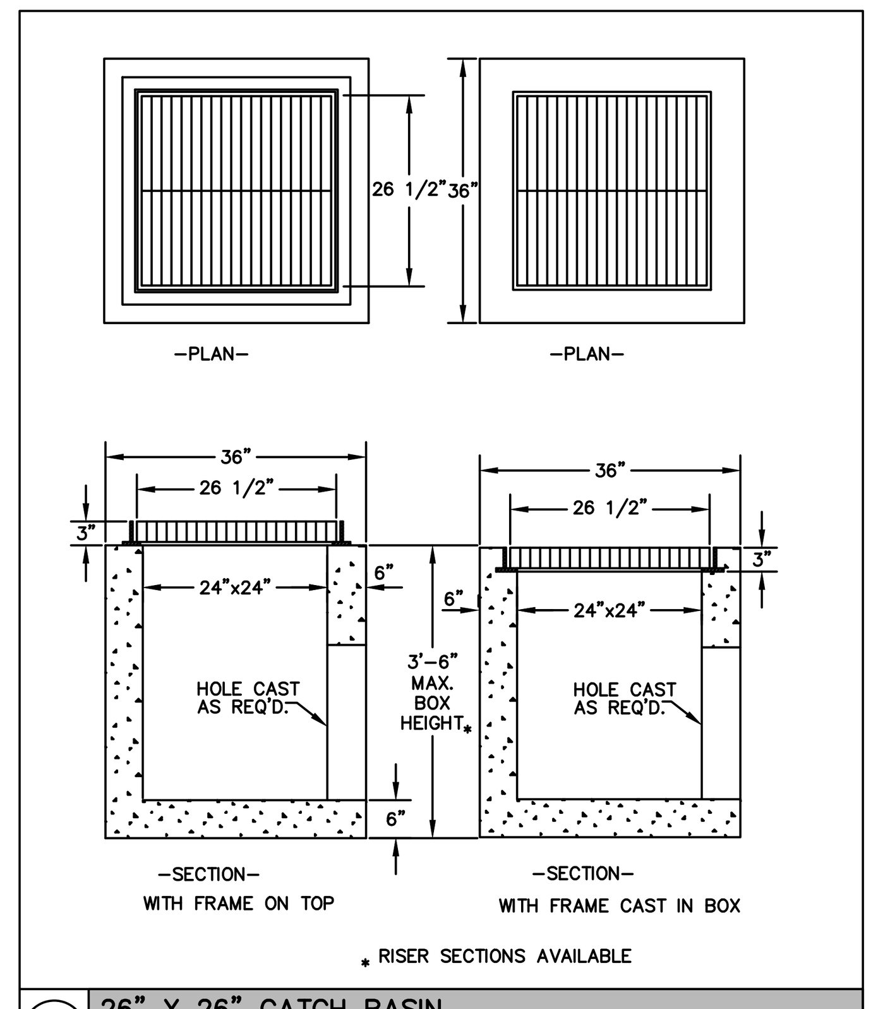
1. A VISUAL INSPECTION OF THE FOLLOWING SYSTEM COMPONENTS SHALL BE PERFORMED SEMI-ANNUALLY TO LOOK FOR VISUAL DEFICIENCIES IN THE FORM OF SEDIMENTATION AND DEBRIS:
1.a. MANHOLES LOCATED BEFORE AND/OR AFTER THE STORMTANK SYSTEM
1.b. INLET AND OUTLET PIPING
1.c. DISCHARGE AREA
2. INSPECT THE SYSTEM WHILE IN OPERATION, MAKING SURE INLETS REMAIN OPEN AND THE SYSTEM DOESN'T BACK UP.
3. IF, DURING THE SEMI-ANNUAL INSPECTION, IT IS FOUND THAT SEDIMENT HAS ACCUMULATED IN THE ISOLATOR ROW, A ROD SHOULD BE INSERTED TO DETERMINE THE DEPTH OF THE SEDIMENT.
4. IF THE SEDIMENT DEPTH EXCEEDS 3 INCHES THROUGHOUT THE LENGTH OF THE ISOLATOR ROW, CLEAN-OUT SHOULD BE PERFORMED.
5. MAINTENANCE SHOULD BE PERFORMED UTILIZING THE JETVAC PROCESS IN ACCORDANCE WITH THE MANUFACTURERS MAINTENANCE PROCEDURES:
5.a. CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS. A FIXED FLOOR CLEANING NOZZLE WITH REAR FACING NOZZLE OF 45 INCHES OR MORE IS PREFERABLE. APPLY MULTIPLE PASSES OF JETVAV UNTIL BACKFLUSH WATER IS CLEAN. VACUUM MANHOLE SUMP AS REQUIRED.
5.b. REPLACE ALL CAPS, LIDS AND COVERS, RECORD OBSERVATIONS AND ACTIONS.
5.c. INSPECT & CLEAN CATCH BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

NOTES:
1. STORMTECH INFILTRATOR SYSTEM TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMENDATIONS. REFER TO STORMTECH'S DESIGN MANUAL. FOR STORMTECH INFORMATION CALL 1-888-892-2694.
2. REFER TO SITE PLANS FOR SPECIFIC SYSTEM LAYOUT AND CONFIGURATION.
3. IF SATURATED SUB-GRADE CONDITIONS ARE ENCOUNTERED, CONTRACTOR SHOULD IMMEDIATELY CONTACT PROJECT ENGINEER.

TYPICAL PROFILE FOR STORMTECH MC-3500 ISOLATOR ROW DETAIL
NOT TO SCALE



* RISER SECTIONS AVAILABLE

26" X 26" CATCH BASIN
NOT TO SCALE

HANDLING OF MATERIALS WITH POTENTIAL TO CAUSE POLLUTION

1. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1., AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
2. SUBSURFACE INVESTIGATION INDICATED SOFT SOILS THAT WILL NEED TO BE EXCAVATED AND EXPORTED FROM THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL OR MANMADE SOILS DETERMINED TO BE UNSUITABLE FOR USE ON THE SITE AND MAKE SURE THE SITE(S)RECEIVING THE EXCESS HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES INCREASING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND CONTACT THE YORK COUNTY CONSERVATION DISTRICT TO ENSURE THAT THE BMPS INSTALLED IS SUFFICIENT FOR THE SITUATION.

FIRST CAPITAL ENGINEERING
48 South Richland Avenue York, PA 17404 Phone (717) 845-FCAP FAX (717) 852-7891
Gettysburg, PA 17325 Phone (717) 337-3827 www.FCAP.com
☆ CIVIL ENGINEERS ☆ MUNICIPAL ENGINEERS ☆ ENVIRONMENTAL SCIENTISTS ☆
☆ LANDSCAPE ARCHITECTS ☆ PLANNERS ☆ SURVEYORS ☆

No.	DATE	REVISION	BY
3	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB
2	5/28/21	PER CITY OF READING PUBLIC WORKS DATED 5/24/21	ARB
2	5/28/21	PER HAWK VALLEY ASSOC. DATED 5/17/21	ARB
1	5/10/21	PER HAWK VALLEY ASSOC. DATED 4/22/21	ARB
1	5/10/21	PER COUNTY OF BERKS PC DATED 4/19/21	ARB
1	5/10/21	PER BCCD DATED 4/21/21	ARB
1	5/10/21	PER CITY OF READING PUBLIC WORKS DATED 4/26/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT
PRELIMINARY-FINAL LAND DEVELOPEMENT PLANS
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA

DETAILS

DRAWN BY: ARB | CHECK BY: ✓
CADD FILE No. 1476-1 PCSM DTL
DATE: 12-3-20 | JOB No.: 1476-1
SCALE: NOTED

SHEET
PCSM-3

EROSION & SEDIMENTATION CONTROL PLAN
MARION STREET STATION READING FIRE DEPARTMENT
BERKS COUNTY, PENNSYLVANIA
CITY OF READING

FIRST CAPITAL ENGINEERING

48 South Richland Avenue
BERKS, PA 17404
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FCE # 1476-1
DATE: 12-3-20
PROJECT MANAGER: JDB
DRAWN BY: ARB
CHECKED BY:

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
2. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES – 6 TO 12 INCHES ON COMPACTED SOILS – PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
3. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OF MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE BERKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
5. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
6. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE EARTH DISTURBANCE ACTIVITY, OR FAILURE TO TAKE IMMEDIATE CORRECTION ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
7. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1., AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
9. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.).
10. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
11. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL."
12. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THE AREA DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. ONLY DISTURB INITIALLY WHAT IS NEEDED TO INSTALL BMP'S.
13. ALL WASTES AND MATERIALS DEPOSITED IN AND REMOVE FROM POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BMP FACILITIES AND FROM IMPERVIOUS AREAS (EX. SWEEPING OF STREETS & PARKING LOTS) DURING OPERATION AND MAINTENANCE SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET. SEQ., 271.1, AND 287.1 ET. SEQ. NO WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE

MAINTENANCE PROGRAM

1. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
2. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
3. A LOG SHOWING THE DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THAT THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE BERKS COUNTY CONSERVATION DISTRICT OR OTHER REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

SOILS LIMITATIONS AND RESOLUTIONS

1. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL
2. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
3. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
4. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
7. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

EROSION NOTES

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE BERKS COUNTY CONSERVATION DISTRICT.
2. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES INCREASING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT.
3. INSTALL EROSION & SEDIMENT CONTROLS PER THE CONSTRUCTION DETAILS AND LOCATIONS PROVIDED ON THE PLAN.
4. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ON SITE FOR THE THE INSTALLATION OF SUBSURFACE BASIN.

CONSTRUCTION SEQUENCE

THE CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION FOR WHICH THE DESIGN PROFESSIONAL SHALL BE NOTIFIED SO THAT THEY MAY BE PRESENT ONSITE DURING CONSTRUCTION INCLUDE THE INSTALLATION OF THE SUBSURFACE BASIN.

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE THE FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ONLY DISTURB INITIALLY WHAT IS NEEDED TO INSTALL THE BMP'S. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE BERKS COUNTY CONSERVATION DISTRICT.
2. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE BERKS COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
3. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. FIELD MARK THE LIMITS OF DISTURBANCE AS SHOWN ON PLAN INSTALL THE CONSTRUCTION FENCE WHERE INDICATED ON THE PLAN. INSTALL ALL REQUIRED INLET PROTECTION FOR EXISTING INLETS.
5. DEMOLISH EXISTING CURB AND SIDEWALK. TAKE CARE TO PREVENT DEBRIS FROM ACCUMULATING ON SITE. AFTER DEMOLISHING THE EXISTING CURB AND SIDEWALK, INSTALL ROCK CONSTRUCTION ENTRANCES AND SILT SOCKS WHERE THE PLAN INDICATES.
6. AFTER DEMOLITION IS COMPLETE, GRADE THE SITE AND INSTALL THE PROPOSED UNDERGROUND UTILITIES (SEWER, WATER, GAS, ELECTRIC).
7. ONCE THE BULK GRADING HAS BEEN COMPLETED, INSTALL THE STORM SEWER AND STORMWATER BASINS. THE INSTALLATION OF THE BASINS IS A CRITICAL STAGE OF PLAN IMPLEMENTATION AND THE DESIGN ENGINEER MUST BE NOTIFIED PRIOR TO BASIN INSTALLATION. WHILE BASINS ARE BEING CONSTRUCTED, CARE MUST BE TAKEN TO DIVERT RUNOFF AROUND EXCAVATIONS TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE BASINS. AS INLETS ARE INSTALLED, IMMEDIATELY INSTALL REQUIRED INLET PROTECTION AND STABILIZE DISTURBED AREAS WITH TEMPORARY SEEDING.
8. BEGIN CONSTRUCTION OF THE BUILDING. TAKE CARE TO PREVENT DEBRIS FROM ACCUMULATING ON SITE.
9. PLACE STONE SUBBASE IN ALL AREAS TO BE PAVED. ONCE BASINS HAVE BEEN INSTALLED AND STONE HAS BEEN PLACED TO LIMIT THE DISTURBED AREA, THE CONSTRUCTION OF THE STRUCTURES MAY BEGIN.
10. AS CONSTRUCTION OF THE BUILDING IS COMPLETED, INSTALL PROPOSED CURB, SIDEWALK, AND PAVING. STABILIZE SURROUNDING DISTURBED AREAS WITH PERMANENT SEEDING AND STABILIZATION.
11. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNERS AND/OR OPERATORS SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMP'S.
12. ONCE THE SITE IS STABILIZED, REMOVE THE INLET PROTECTION AND CONVERT THE SEDIMENT TRAP TO IT'S FINAL STORMWATER CONDITION. INSTALL SEDIMENT TRAP DEWATERING FACILITY AS SHOWN ON SHEET ES-3. ONCE THE TRAP HAS BEEN DEWATERED, REMOVE THE ACCUMULATED SEDIMENT TO A DEPTH OF 2 FEET BELOW THE BOTTOM OF THE STORMWATER BASIN. PLACE 2 FEET OF AMENDED SOILS IN THE BOTTOM OF THE BASIN AND PLACE PERMANENT SEEDING AND MULCH. THE PLACEMENT OF THE AMENDED SOILS IN THE BASIN IS A CRITICAL STAGE OF PCSM PLAN IMPLEMENTATION. THE DESIGN ENGINEER SHALL BE NOTIFIED SO THEY MAY OBSERVE.
13. ONCE SITE IS PERMANENTLY STABILIZED (PERMANENT STABILIZATION IS DEFINED AS: A MINIMUM OF 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH DENSITY SUFFICIENT TO RESIST EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS) AND WITH CONSENT FROM THE BERKS COUNTY CONSERVATION DISTRICT, REMOVE THE REMAINING SEDIMENT CONTROLS FROM THE SITE AND SEED AND MULCH ANY DISTURBED AREAS CAUSED BY THEIR REMOVAL.
14. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMP'S, INSTALLATION OF ALL PERMANENT PCSM BMPS, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OPERATORS SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.
15. THE ORDER OF THE ABOVE SCHEDULE IS SUBJECT TO CHANGE DUE TO SITE-SPECIFIC CONDITIONS AND CONSTRUCTION METHODS. ANY CHANGES SHOULD BE MADE UNDER THE DIRECTION OF A REPRESENTATIVE FROM THE BERKS COUNTY CONSERVATION DISTRICT.

HANDLING OF MATERIALS WITH POTENTIAL TO CAUSE POLLUTION

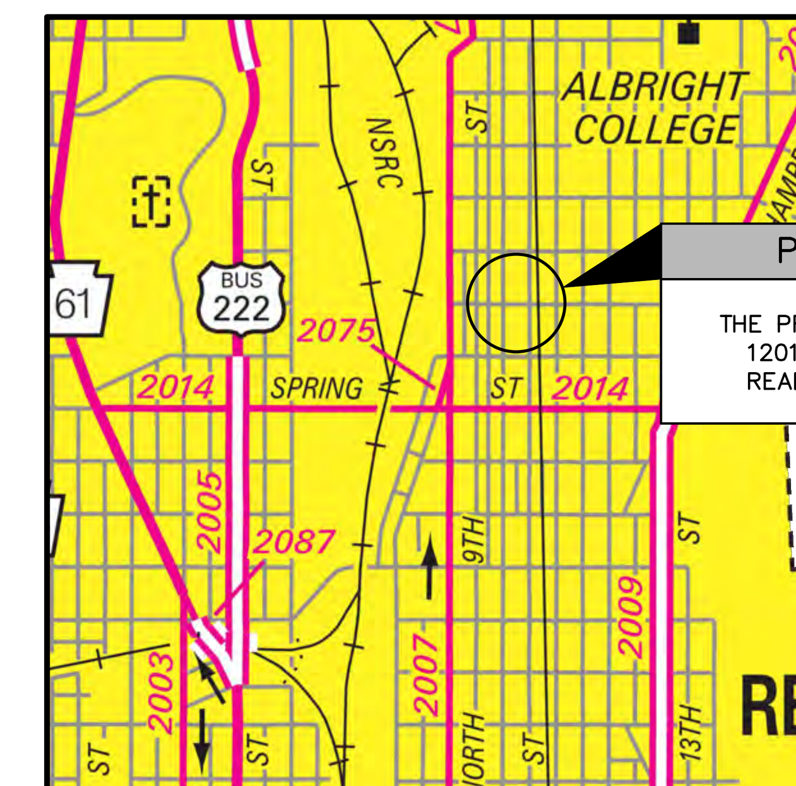
1. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1., AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL OR MANMADE SOILS DETERMINED TO BE UNSUITABLE FO USE ON THE SITE AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSIONS AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS. BASED ON THE PHASE 1 ENVIRONMENTAL SITE ASSESSMENT PREPARED BY FIRST CAPITAL ENGINEERING, INC. THERE ARE NO EXPECTED ENVIRONMENTAL ISSUES ANTICIPATED AT THIS LOCATION.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES INCREASING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND CONTACT THE BERKS COUNTY CONSERVATION DISTRICT TO ENSURE THAT THE BMPS INSTALLED IS SUFFICIENT FOR THE SITUATION.

STABILIZATION SPECIFICATIONS

1. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
2. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
3. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.
4. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
5. STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL. THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3:1. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. (NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED). A WOOD CELLULOSE FIBER MAY BE SPREAD OVER THE STRAW MULCH AT A RATE OF 1,500 LB./ACRE.
6. TRACKING SLOPES IS DONE BY RUNNING TRACKED MACHINERY UP AND DOWN THE SLOPE, LEAVING TREAD MARKS PARALLEL TO THE CONTOUR. (NOTE: IF A BULLDOZER IS USED, THE BLADE SHALL BE UP.) CARE SHOULD BE EXERCISED ON SOILS HAVING A HIGH CLAY CONTENT TO AVOID OVER-COMPACTION.

PA ONE CALL

PA ONE CALL ID NUMBER FOR THIS JOB IS 20202961643. LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON RECORD DRAWINGS, AND/OR SURFACE EVIDENCE ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL CONTACT THE PA ONE CALL SYSTEM (1-800-242-1776), A MINIMUM OF 3 DAYS PRIOR TO EXCAVATION AS REQUIRED BY PA ACT 121 (OCT. 2008).



LOCATION MAP
SCALE: 1"= 2000'

PROPERTY LOCATION

THE PROPERTIES ARE LOCATED AT:
1201 N. 9TH STREET
READING, PA 19604

E&S SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
ES CS	E&S COVER SHEET
ES-1	EXISTING CONDITION PLAN
ES-2	EROSION AND SEDIMENT CONTROL PLAN
ES-3	EROSION AND SEDIMENT CONTROL DETAIL SHEET 1
ES-4	EROSION AND SEDIMENT CONTROL DETAIL SHEET 2

ENGINEER'S CERTIFICATION

I, JOSEPH D. BROWN, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN WAS PREPARED USING ACCEPTED ENGINEERING METHODS AND TO THE BEST OF MY KNOWLEDGE, REPRESENTS THE EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS AS SURVEYED AND PLOTTED UNDER MY DIRECTION FOR THE OWNERS OR AGENTS.

JOSEPH D. BROWN, PROFESSIONAL ENGINEER, PA NO. PE074211

DATE

No.	DATE	REVISION	BY
1	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB

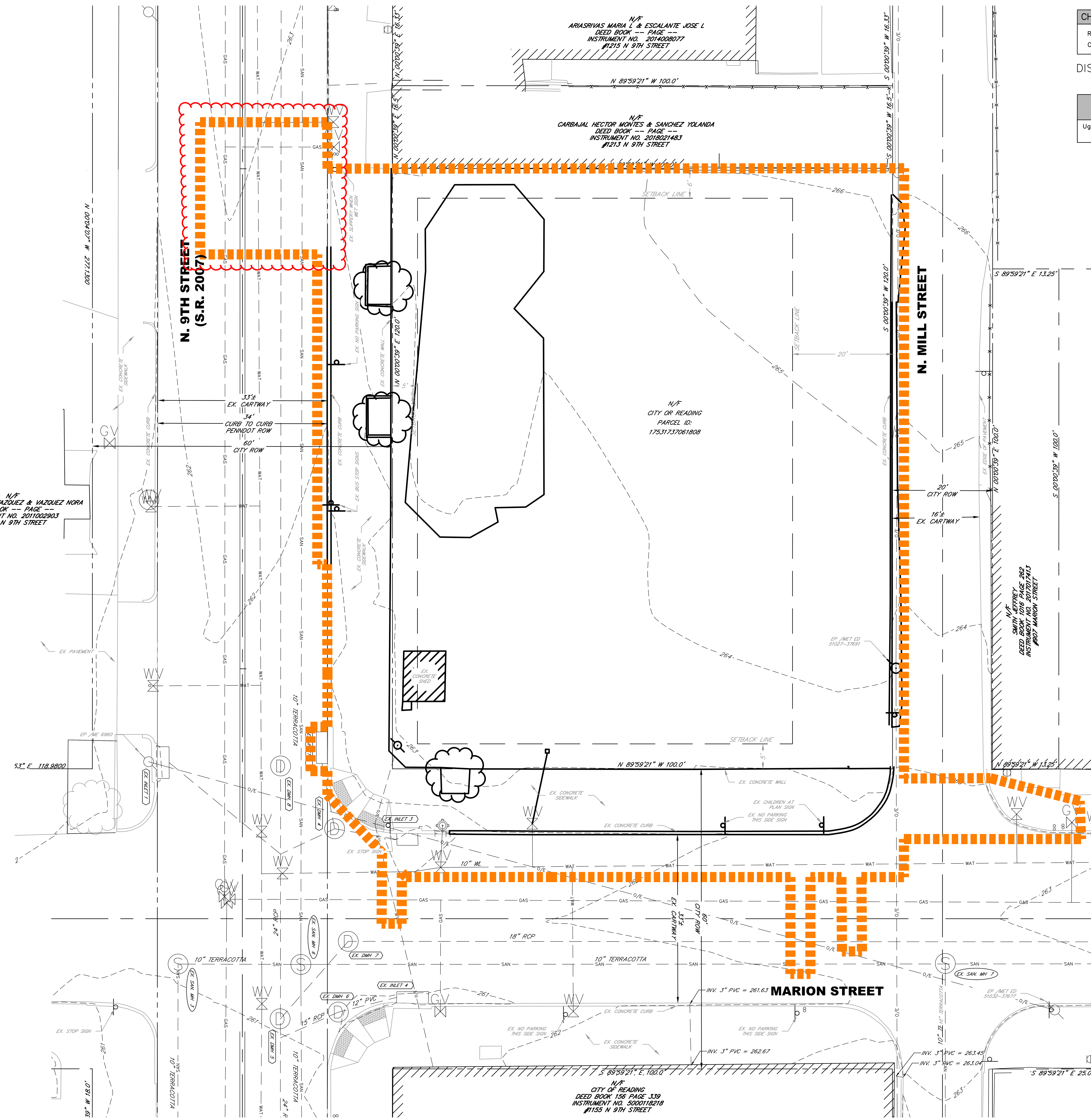
EROSION & SEDIMENTATION CONTROL
1476-1 COVERSHEET BORDER DESCRIPTION

FIRST CAPITAL ENGINEERING

LEGEND

ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING OVERHEAD ELECTRIC	O/E
EXISTING UNDERGROUND ELECTRIC	U/E
EXISTING OVERHEAD TELEPHONE	O/T
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
EXISTING FENCE	X
EXISTING GUIDERAIL	
PROPERTY LINE	
RIGHT–OF–WAY	
ZONING BOUNDARY	
EXISTING TREE LINE	
EXISTING UTILITY POLE	
EXISTING GUY WIRE	
EXISTING ELECTRIC MANHOLE	E
EXISTING GAS MANHOLE	G
EXISTING SANITARY SEWER MANHOLE	S
EXISTING STORM DRAIN MANHOLE	D
EXISTING TELEPHONE MANHOLE	T
EXISTING WATER MANHOLE	W
EXISTING ELECTRIC BOX	E
EXISTING TELEPHONE BOX	T
EXISTING CABLE BOX	C
EXISTING GAS VALVE	GV
EXISTING GAS METER	
EXISTING WATER VALVE	WV
EXISTING FIRE HYDRANT	
EXISTING INLET	
EXISTING LIGHT POLE	
EXISTING STREET SIGN	

LIMIT OF DISTURBANCE/NPDES PERMIT BOUNDARY



CHAPTER 93 CLASSIFICATION
RECEIVING WATERCOURSE: SCHUYLKILL RIVER
CHAPTER 93 CLASSIFICATION: WWF

DISTURBED AREA – 0.41 ACRES

SOIL TYPE	HYDROLOGIC SOIL GROUP	AVG. SLOPE	BEDROCK DEPTH	DEPTH TO SEASONAL WATER TABLE
UgB – URBAN LAND	D	0–8%	–	–

GRAPHIC SCALE

10 0 10 20 30

SCALE 1" = 10'

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MARION STREET STATION READING FIRE DEPARTMENT

EROSION & SEDIMENTATION CONTROL
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET

CITY OF READING
BERKS COUNTY, PENNSYLVANIA

EROSION & SEDIMENTATION CONTROL EXISTING CONDITIONS

DRAWN BY: ARB	CHECK BY:
CADD FILE No. 1476–1 ES–EXC	
DATE: 2–08–21	JOB No.: 1476–1
SCALE: NOTED	

SHEET
ES–1

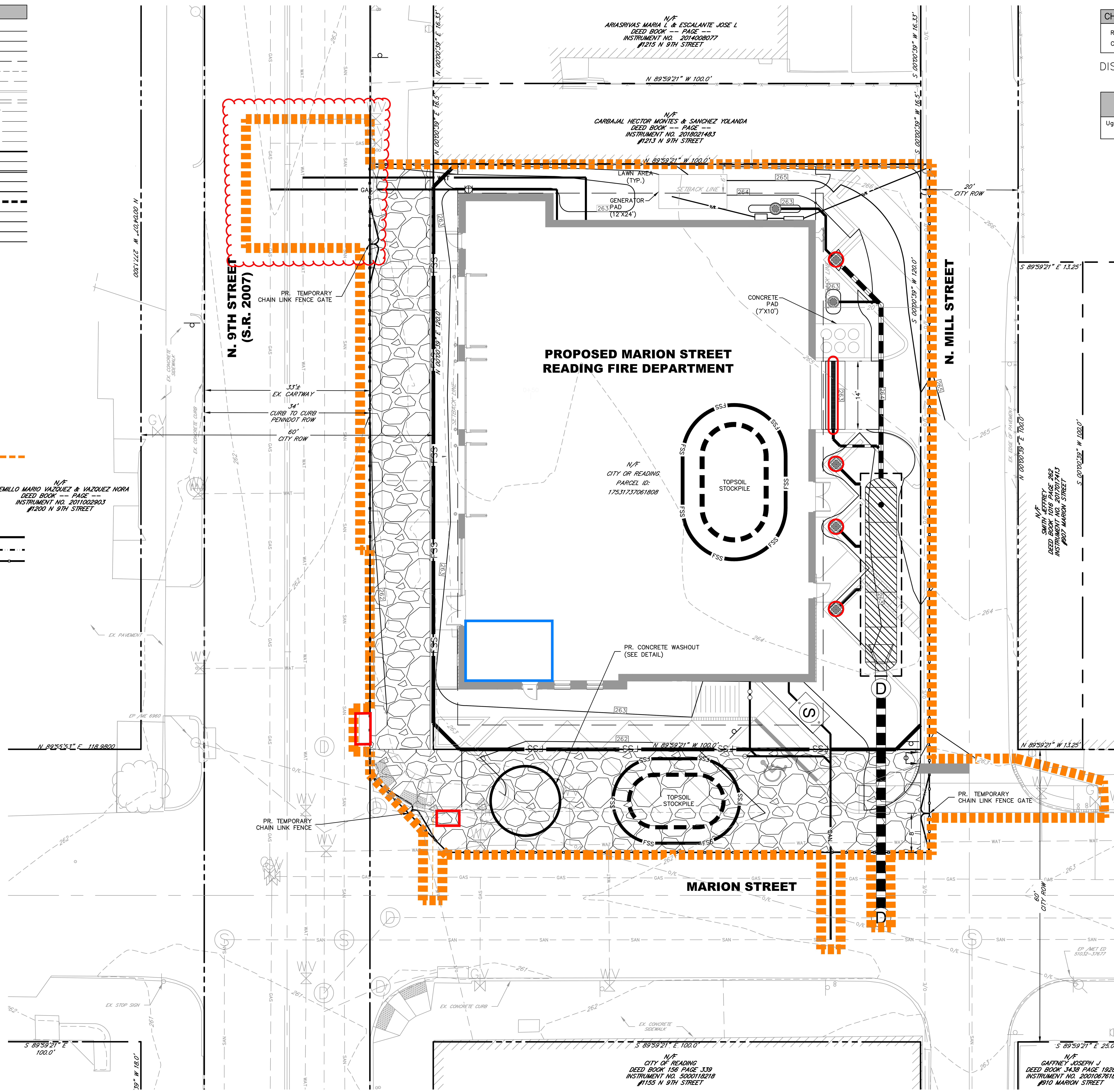
LEGEND

Item	Symbol
ADJOINING PROPERTY LINE	
EASEMENT LINE	
CENTER LINE	
BUILDING SETBACK LINE	
EXISTING GRADES	###
EXISTING INDEX GRADES	###
EXISTING CURB	
EXISTING DRAINAGE	###
EXISTING UNDERGROUND TELEPHONE	U/T
EXISTING NATURAL GAS	GAS
EXISTING SANITARY SEWER	SAN
EXISTING WATER	WAT
PROPERTY LINE	
RIGHT-OF-WAY	
PROPOSED CURB	
PROPOSED GRADES	###
PROPOSED INDEX GRADES	###
PROPOSED DRAINAGE	
PROPOSED SANITARY SEWER	SAN
PROPOSED UNDERGROUND ELECTRIC	U/E
PROPOSED NATURAL GAS	GAS
PROPOSED WATER	WAT

EXISTING / PROPOSED

- UTILITY POLE
- GUY WIRE
- ELECTRIC MANHOLE
- GAS MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GAS VALVE
- GAS METER
- WATER VALVE
- FIRE HYDRANT
- INLET
- LIGHT POLE
- STREET SIGN

- LIMIT OF DISTURBANCE
- FILTER BAG INLET PROTECTION
- STONE INLET PROTECTION
- ROCK CONSTRUCTION ENTRANCE (RCE)
- 12" FILTREXX SILT SOXX (FSS)
- TOPSOIL STOCKPILE
- CONSTRUCTION FENCE



CHAPTER 93 CLASSIFICATION
RECEIVING WATERCOURSE: SCHUYLKILL RIVER
CHAPTER 93 CLASSIFICATION: WWF

DISTURBED AREA – 0.41 ACRES

SOIL TYPE	HYDROLOGIC SOIL GROUP	AVG. SLOPE	BEDROCK DEPTH	DEPTH TO SEASONAL WATER TABLE
UgB – URBAN LAND	D	0–8%	–	–

GRAPHIC SCALE

10 0 10 20 30

SCALE 1" = 10'

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No.	DATE	REVISION	BY
1	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT

EROSION & SEDIMENTATION CONTROL

FOR

CITY OF READING

ON

1201 NORTH 9TH STREET

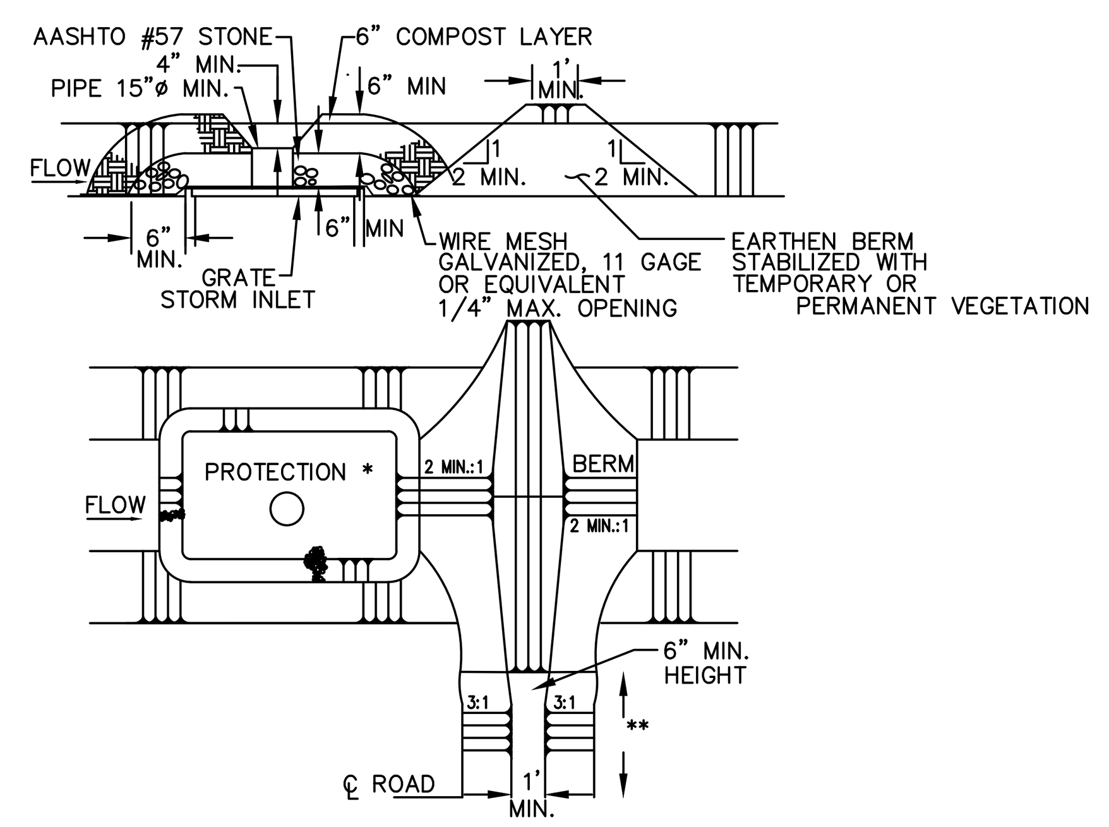
CITY OF READING BERKS COUNTY, PENNSYLVANIA

EROSION & SEDIMENTATION CONTROL PLAN

DRAWN BY:	CHECK BY:	CADD FILE No.	DATE:	JOB No.:	SCALE:
ARB		1476-1 ES-PLAN	12-3-20	1476-1	1"=10'

SHEET

ES-2



* STONE PROTECTION IS NOT REQUIRED FOR INLETS TRIBUTARY TO SEDIMENTATION BASINS OR SEDIMENT TRAPS. BERMS ARE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS

** EARTHEN BERMS IN ROADWAYS SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR SHALL REMAIN PERMANENTLY.

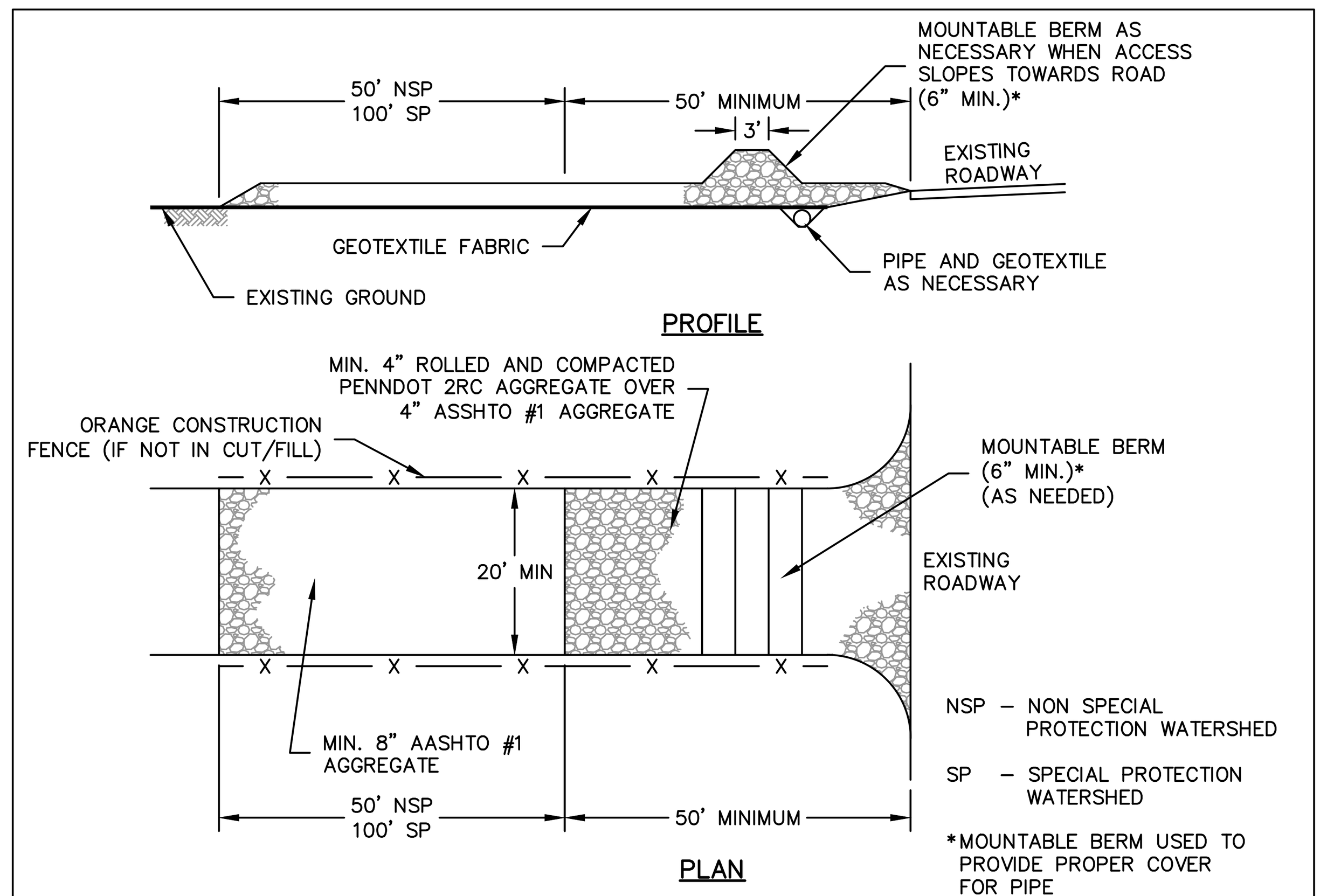
ONE ACRE MAXIMUM DRAINAGE AREA WITH 15" OVERFLOW PIPE AND 4" HEAD.

A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 IN. BELOW ADJACENT ROADWAY IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. FOR SYSTEMS DISCHARGING TO AN HQ OR EV SURFACE WATER, ADD 6 INCH THICK COMPOST LAYER OVER TOP AND UPSTREAM SIDE OF STONE.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY. FOR SYSTEMS DISCHARGING TO AN HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED OVER TOP AND UPSTREAM SIDE OF STONE. COMPOST SHALL MEET THE FOLLOWING STANDARDS: SECURELY ANCHORED OVER TOP AND UPSTREAM SIDE OF STONE. COMPOST SHALL MEET THE FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	25% – 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 – 8.5
MOISTURE CONTENT	30% – 60%
PARTICLE SIZE	30% – 50% PASS THROUGH ⅜" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

STANDARD CONSTRUCTION DETAIL #4–20
STONE INLET PROTECTION AND BERM – TYPE M INLET
NOT TO SCALE



TOPSOIL SHOULD BE REMOVED PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE

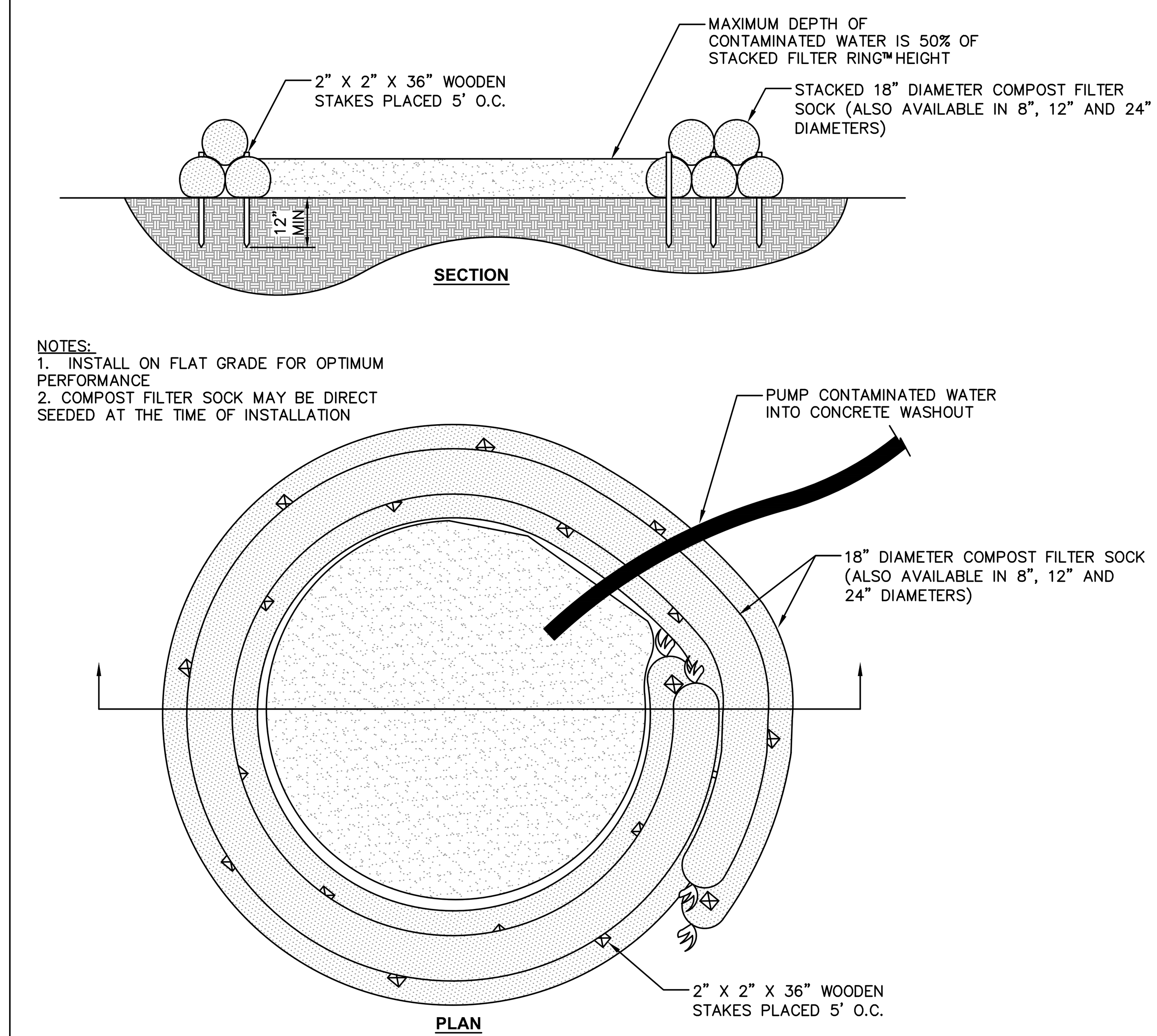
EXTEND ROCK OVER FULL WIDTH OF ENTRANCE

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE

MOUNTABLE BERM SHOULD BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED. PIPE TO BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED

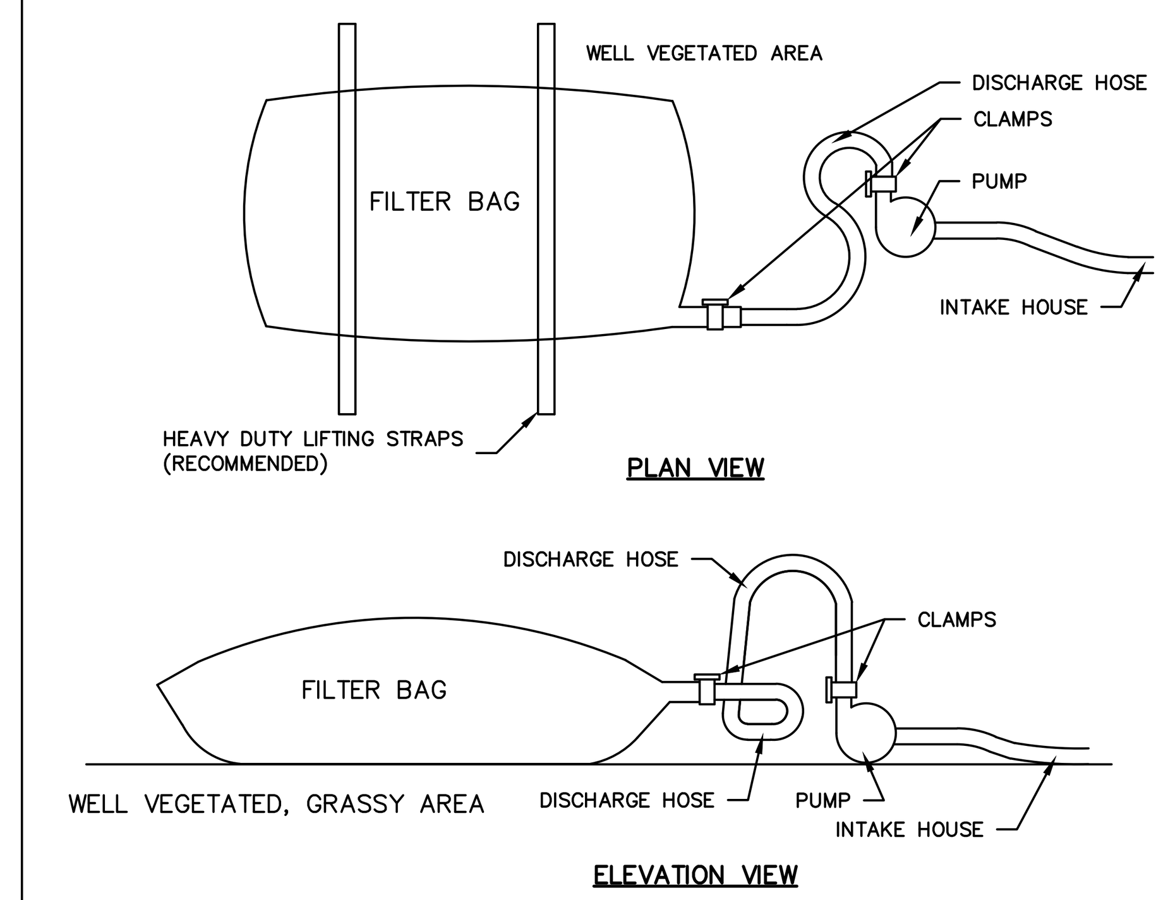
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FEET INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWER, CULVERTS, OR OTHER DRAINAGEWAYS IS NOT ACCEPTABLE.

ABACT ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. COMPOST FILTER SOCK MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION

CONCRETE WASHOUT
NOT TO SCALE



FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. IT IS RECOMMENDED THAT BAGS BE PLACED ON STRAPS TO FACILITATE REMOVAL.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPE EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLATING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

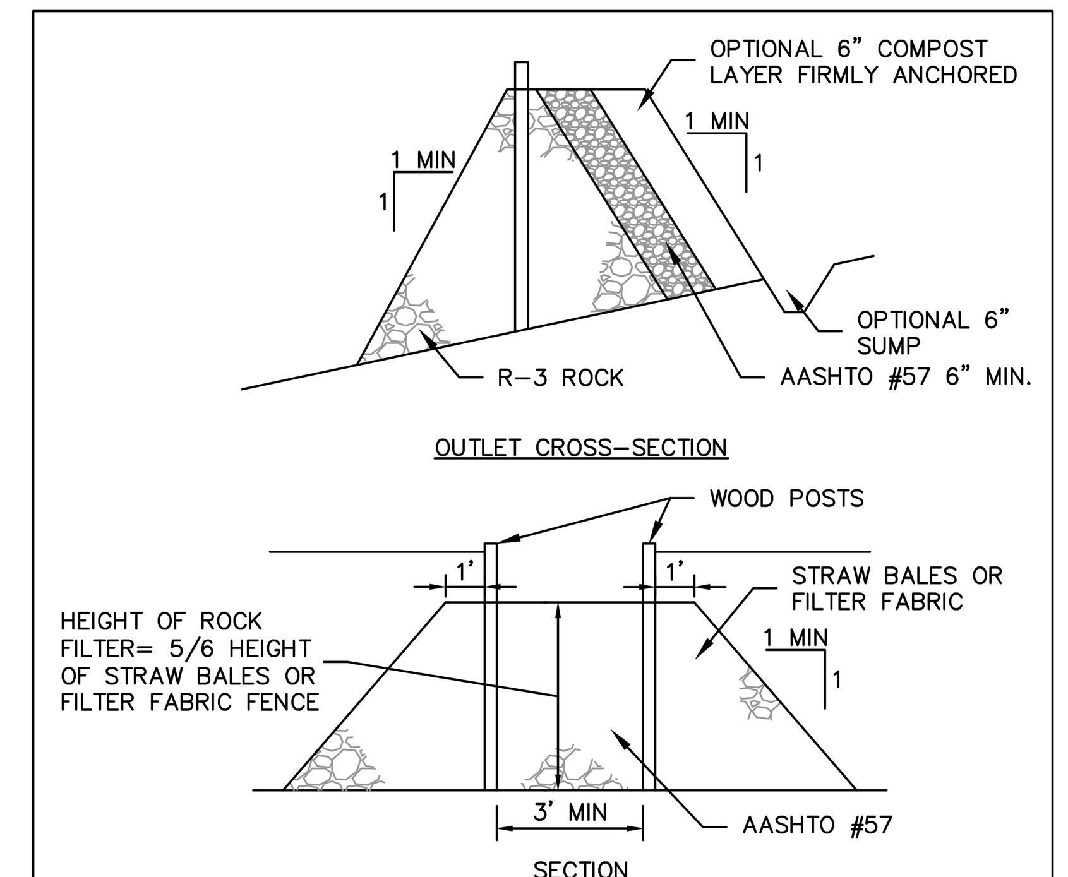
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHOULD BE INSTALLED BELOW BAGS LOCATED WITHIN 50 FEET OF RECEIVING STREAM OR WHERE GRASSY ARE IS NOT AVAILABLE. A COMPOST BERM OR COMPOST FILTER SOCK SHALL BE PLACED BELOW ANY BAG DISCHARGING TO A SPECIAL PROTECTION SURFACE WATER.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

FILTER BAGS SHOULD BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

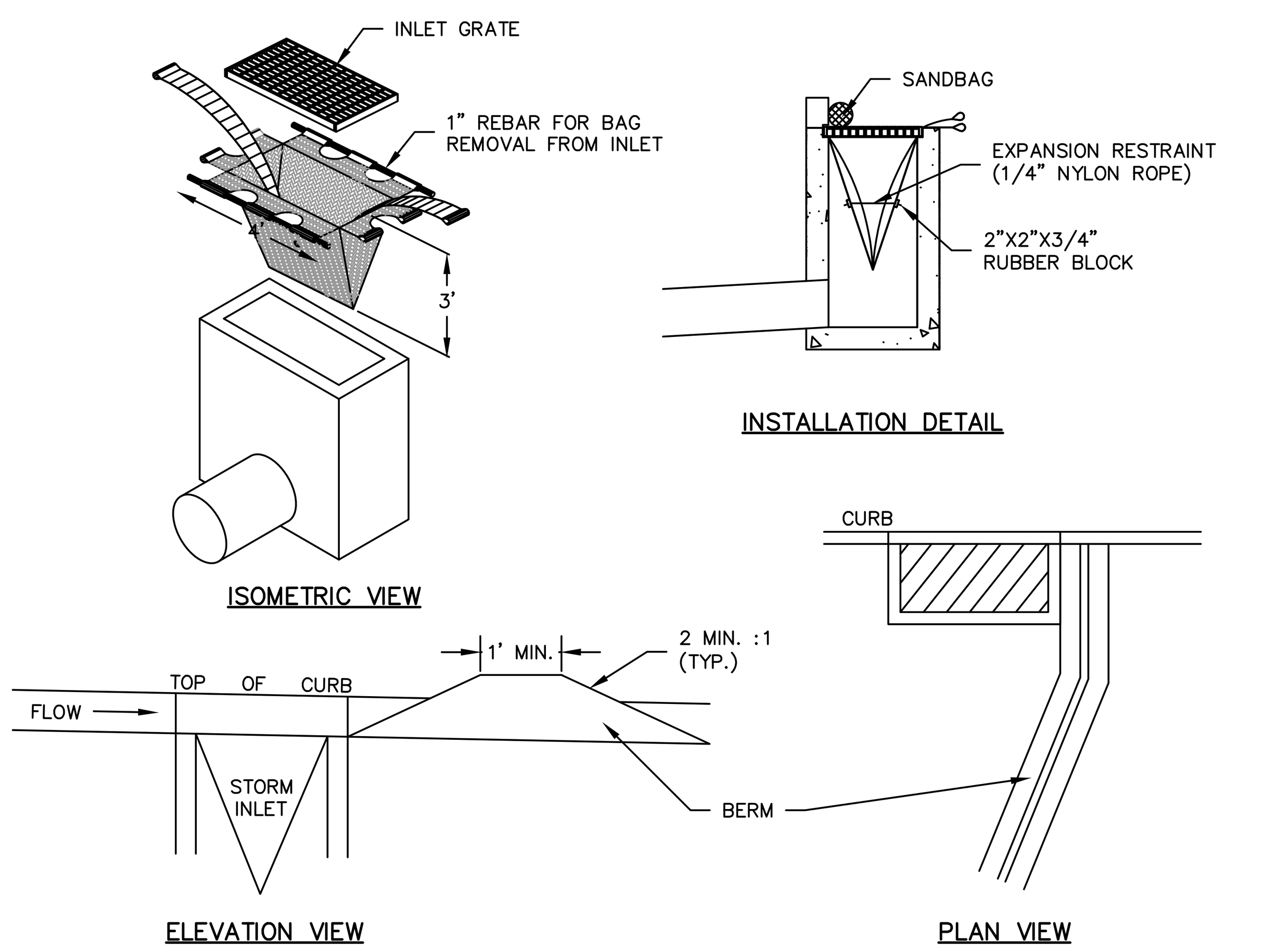
STANDARD CONSTRUCTION DETAIL #3–16
PUMP WATER FILTER BAG
NOT TO SCALE



A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A STRAW BALE BARRIER OR FILTER FABRIC FENCE HAS OCCURRED DUE TO CONCENTRATED FLOW.

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4–6
ROCK FILTER OUTLET
NOT TO SCALE



MAXIMUM DRAINAGE AREA = ½ ACRE.

INLET PROTECTION IS NOT REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS REQUIRED FOR ALL INSTALLATIONS.

EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.

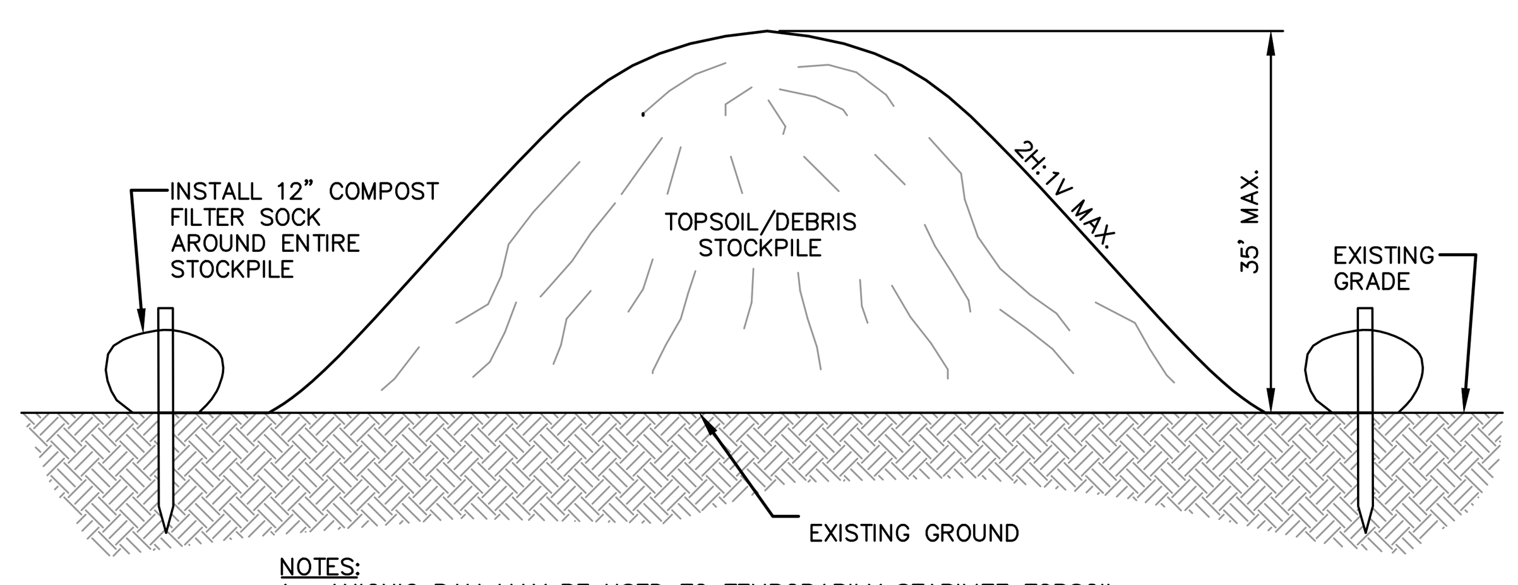
SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI., AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN ½ FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

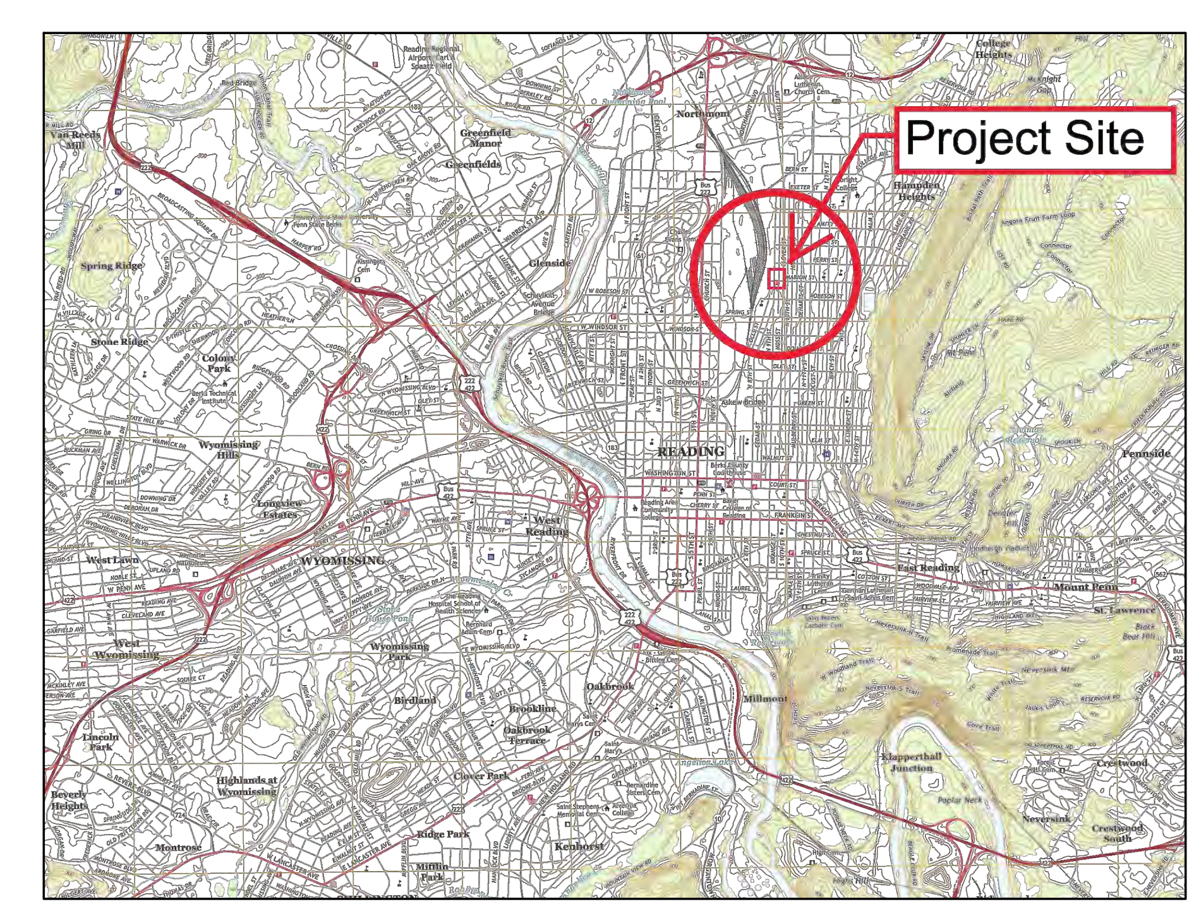
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS

STANDARD CONSTRUCTION DETAIL #4–15
FILTER BAG INLET PROTECTION – TYPE C INLET
NOT TO SCALE



NOTES:
1. ANIONIC PAM MAY BE USED TO TEMPORARILY STABILIZE TOPSOIL STOCKPILES. HOWEVER, ANIONIC PAM MAY LOSE ITS EFFECTIVENESS IN AS LITTLE AS 2 MONTHS. THEREFORE, REAPPLY MIXTURE AS NECESSARY.

TOPSOIL/DEBRIS STOCKPILE DETAIL
NOT TO SCALE



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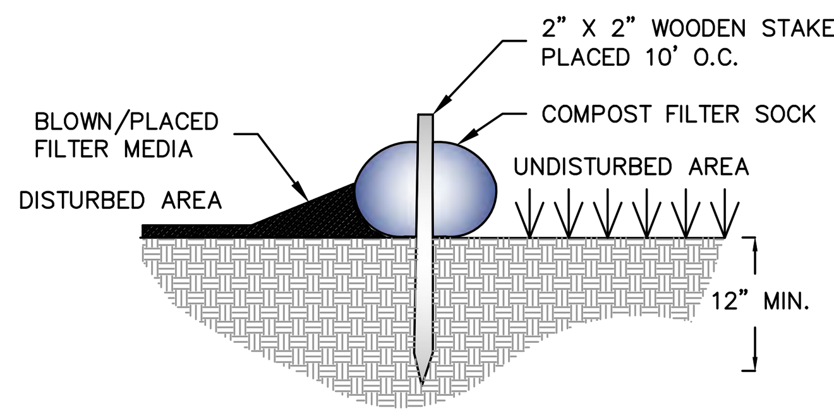
No.	DATE	REVISION	BY
1	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB

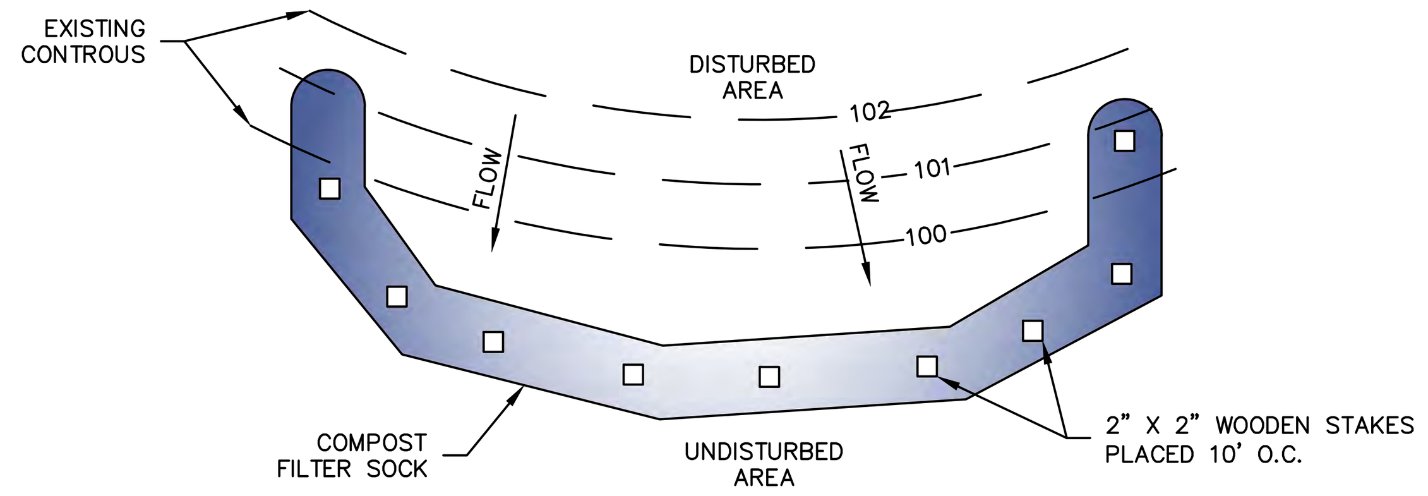
MARION STREET STATION READING FIRE DEPARTMENT
EROSION & SEDIMENTATION CONTROL
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING
BERKS COUNTY, PENNSYLVANIA
EROSION AND SEDIMENTATION CONTROL DETAILS

DRAWN BY: ARB
CHECK BY:
CADD FILE No. 1476-1 ES-DTL
DATE: 12-3-20
JOB No.: 1476-1
SCALE: NOTED

SHEET
ES–3



SECTION VIEW



PLAN VIEW

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY HE MANUFACTURER.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE FILTER SOCK SHALL BE PLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPTLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND MULCH SPREAD AS A SOIL SUPPLEMENT.

TABLE 4.1
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	3/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING			HDPE BIAXIAL NET		
			CONTINUOUSLY WOUND		
			FUSION-WELDED JUNCTURES		
			3/4" X 3/4" MAX. APERTURE SIZE		
OUTER FILTRATION MESH			COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)		
			3/16" MAX. APERTURE SIZE		
SOCK FABRICS COMPOSTED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS					

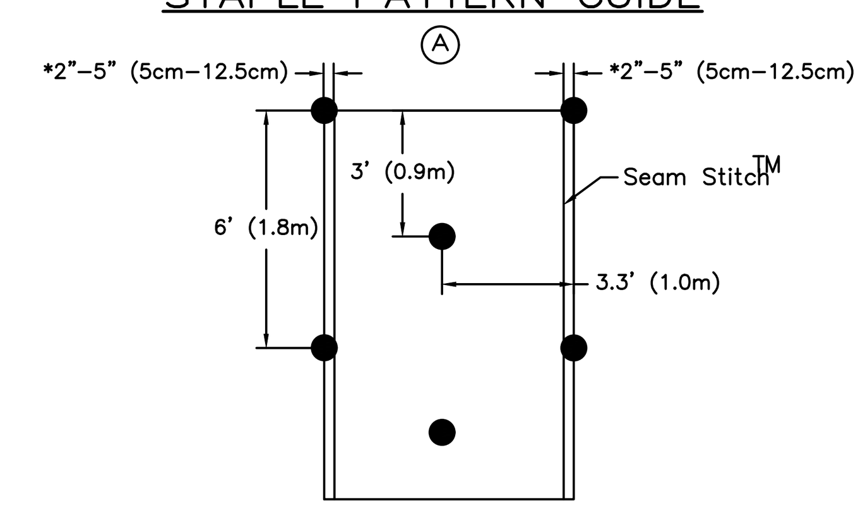
TABLE 4.2
COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% – 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 – 8.5
MOISTURE CONTENT	30% – 60%
PARTICLE SIZE	30% – 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

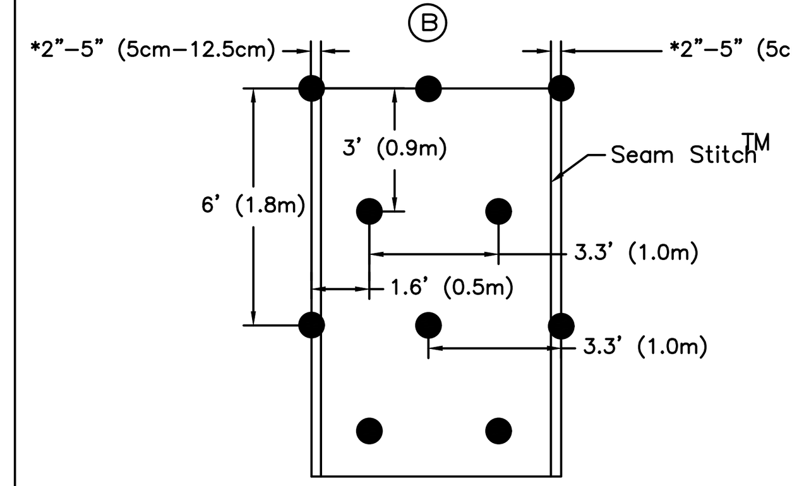
STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK
NOT TO SCALE

STAPLE PATTERN GUIDE

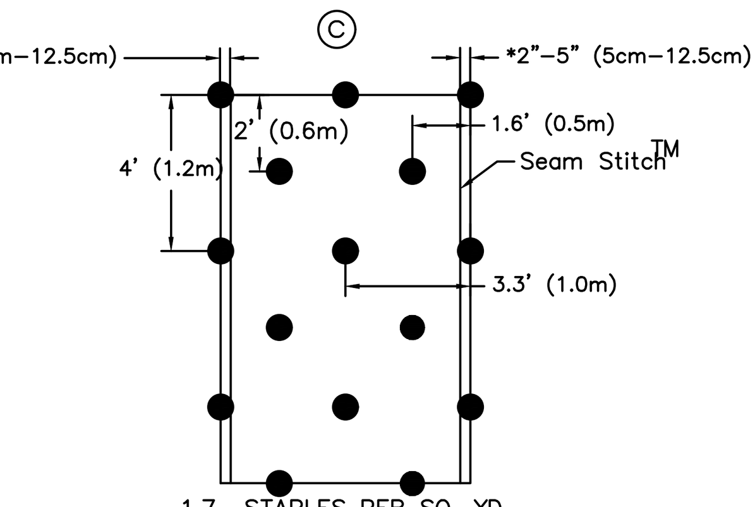
NORTH AMERICAN GREEN
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
USA 1-800-772-2040
CANADA 1-800-448-2040
www.nagreen.com



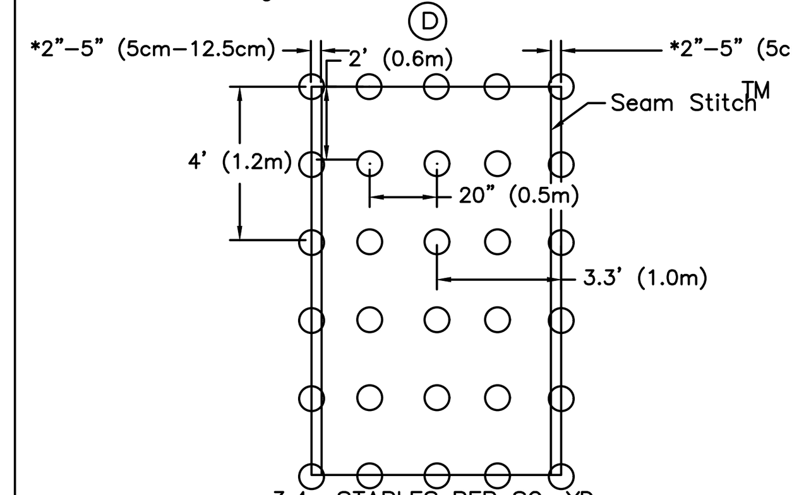
0.7 STAPLES PER SQ. YD.
(0.8 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System TM place staples/stakes through each of the BLUE colored dots.



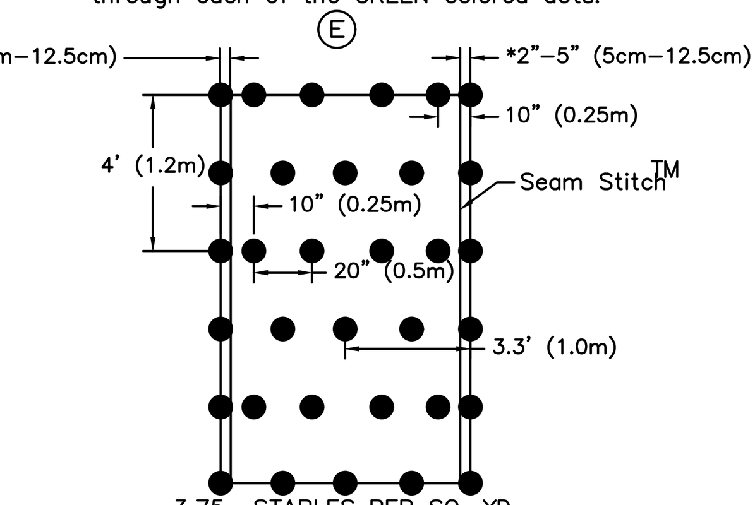
1.15 STAPLES PER SQ. YD.
(1.35 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System TM place staples/stakes through each of the RED colored dots.



1.7 STAPLES PER SQ. YD.
(2.0 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System TM place staples/stakes through each of the GREEN colored dots.



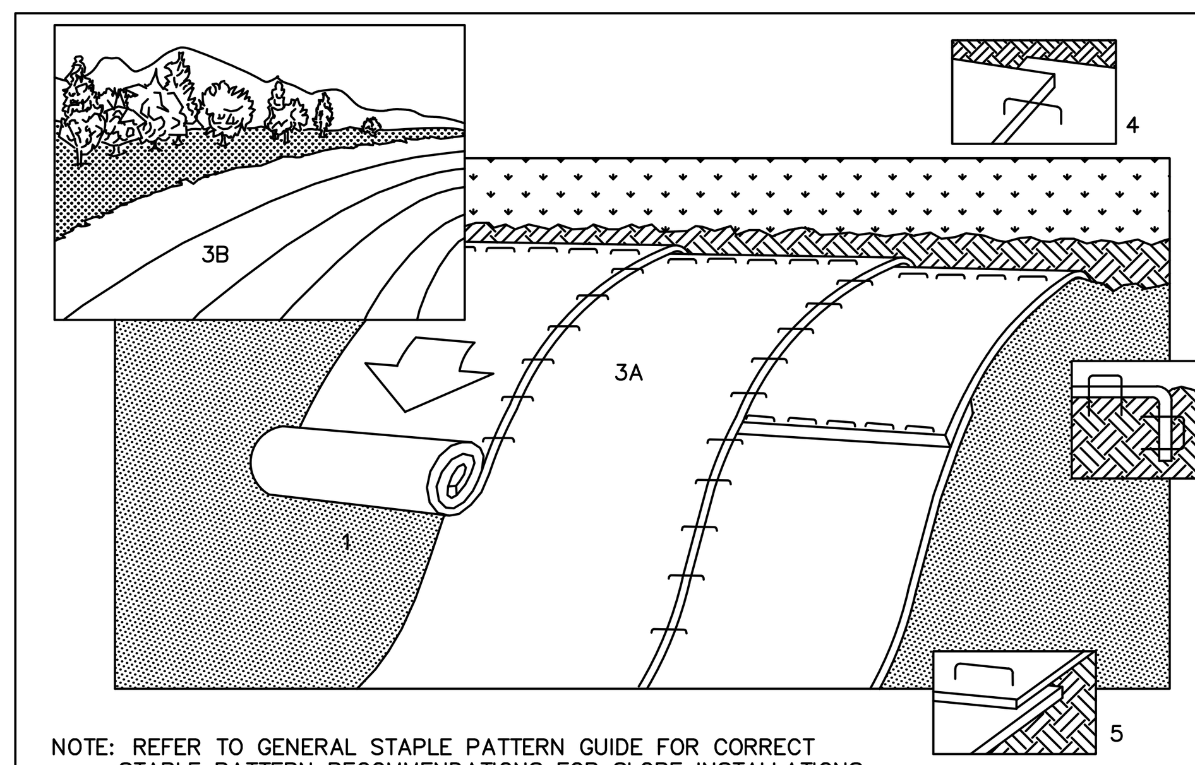
3.4 STAPLES PER SQ. YD.
(4.1 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System TM place staples/stakes through each of the WHITE colored dots.

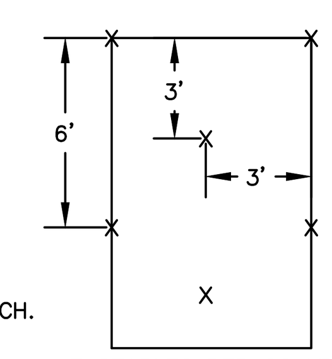


3.75 STAPLES PER SQ. YD.
(4.5 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System TM place staples/stakes through each of the YELLOW colored dots.

*Location of Seam Stitch TM will vary depending on North American Green product type:

STAPLE PATTERN GUIDE
NOT TO SCALE





.7 STAPLES PER SQ YD

STAPLE PATTERN A

NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. EROSION BLANKETS WITH COMPOST SHALL BE PLACED ON ALL SLOPES OF 3:1 TO 2.5:1 AND TURF REINFORCEMENT MATTING WITH COMPOST SHALL BE PLACE ON ALL SLOPES 2.5:1 OR STEEPER.

SLOPE INSTALLATION
NOT TO SCALE

SEEDING & STABILIZATION

THE CONTRACTOR SHALL PLACE TOPSOIL, TO A MINIMUM OF 6 INCHES, IN THOSE AREAS WHICH HAVE BEEN DISTURBED BY WORK.

IT SHALL BE RAKED AND TRIMMED TO TRUE LINES, AND SHALL BE FREE FROM UNSIGHTLY VARIATIONS. IF SEEDING IS NOT POSSIBLE, SWALES AND ALL OTHER DISTURBED AREAS THAT WOULD NORMALLY BE SEEDED MUST BE COVERED WITH JUTE MATTING UNTIL SEEDING IS EFFECTIVE.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON GERMINATION PERIODS. MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

TEMPORARY SEEDING

1. SEEDBED PREPARATION – LOOSEN UPPER 3 INCHES BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS.
2. SEEDING – FOR THE PERIOD OF MARCH 1 THRU OCTOBER 31 APPLY 10 LBS./1,000 SQ. YDS. "FAST GROW" ANNUAL RYEGRASS AND FOR THE PERIOD OF NOVEMBER 1 THRU FEBRUARY 28 APPLY 10 LBS./1,000 SQ.YDS. WINTER RYEGRASS.
3. MULCHING – CLEAN HAY OR STRAW. APPLY MULCH UNIFORMLY AT A MINIMUM RATE OF 3 TONS/ACRE FOR TEMPORARY AND PERMANENT SEEDING. PROPERLY ANCHOR THE MULCH. MULCHING MUST ALSO BE PROVIDED FOR THE STABILIZATION OF DISTURBED AREAS DURING THE NON-GROWING SEASON.
4. APPLY LIME, FERTILIZER, AND MULCH AS FOLLOWS: PULVERIZED AGRICULTURAL LIMESTONE, 1 TON/ACRE; 5-5-5 COMMERCIAL ANALYSIS FERTILIZER, 1,000 lbs/ACRE; MULCH, 3 TONS/ACRE.

PERMANENT SEEDING & MULCHING

1. SITE PREPARATION

1.1. INSTALL EROSION CONTROL PRACTICES SHOWN ON PLAN.

1.2. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, ANCHORING AND MAINTENANCE.

2. SEEDBED PREPARATION

FLAT AREAS AND SLOPES UP TO 3 TO 1 GRADE SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 2 INCHES. THE TOP LAYER OF SOIL SHALL BE LOOSENED BY RAKING, DISCING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

3. SOIL AMENDMENTS

APPLY 4 TONS/ACRE OF PULVERIZED AGRICULTURAL LIMESTONE, 1000 LBS/ACRE. OF 10-20-20 COMMERCIAL ANALYSIS FERTILIZER.

4. SEEDING

SEED MIXTURE	%BY WEIGHT	MINIMUM % PURITY	MINIMUM % GERMINATION
MARQUIS KENTUCKY BLUEGRASS	50	98	85
RIVIERA PERENNIAL RYEGRASS	30	95	85
PENNLAWN RED FESCUE	20	98	85

WHENEVER SEEDING IS TO BE DONE ON SLOPES STEEPER THAN 3:1, SEED MIXTURES SHOULD BE SELECTED THAT ARE APPROPRIATE FOR STEEP SLOPES. TABLE 4 IN THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND AND TABLE A (SECTION 804.2(b)) IN PADOT PUBLICATION 208 IDENTIFY SEED MIXTURES SUITABLE FOR STEEP SLOPE CONDITIONS.

PA DOT FORMULA D IN AREAS OF THE STORMWATER DETENTION BASIN.

APPLY SEED AT A MINIMUM OF 20 LBS. PER 1,000 S.Y. SPECIFIC SEED MIX TO BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PERMANENT SEEDING TO BE DONE BETWEEN MARCH 15 AND OCTOBER 15 AND PREFERRED PERIODS ARE MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15.

NOTE: EQUIVALENT SEED MIXTURES AND APPLICATION RATES MAY BE USED PROVIDED THEY ARE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

5. SODDING

SEED MIXTURE	%BY WEIGHT	MINIMUM % PURITY	MINIMUM % GERMINATION
BARVADO TALL FESCUE	29.88	98	90
XTREME GREEN TALL FESCUE	29.76	95	90
INFERNO TALL FESCUE	29.65	98	90
RAVEN KENTUCKY BLUEGRASS	9.93	98	90

6. MULCHING

CLEAN HAY OR STRAW. APPLY MULCH UNIFORMLY AT A MINIMUM RATE OF 3 TONS/ACRE FOR TEMPORARY AND PERMANENT SEEDING. PROPERLY ANCHOR THE MULCH. MULCHING MUST ALSO BE PROVIDED FOR THE STABILIZATION OF DISTURBED AREAS DURING THE NON-GROWING SEASON.

7. IRRIGATION

IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED, IF FEASIBLE. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON IN ABNORMALLY DRY OR HOT SEASONS OR ON ADVERSE SITES.

8. MAINTENANCE

8.1. IRRIGATION – IF SOIL MOISTURE BECOMES DEFICIENT, IRRIGATE TO PREVENT LOSS OF STAND OF PROTECTIVE VEGETATION, IF FEASIBLE.

8.2. REPAIRS – INSPECT ALL SEED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE.

8.2.1. IF STAND IS INADEQUATE FOR EROSION CONTROL, OVERSEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY APPLIED.

8.2.2. IF STAND IS OVER 60% DAMAGE, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS.

9. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSION CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.

10. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 271.1 et seq., AND 287.1 et seq. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, BURNED, DUMPED, OR DISCHARGED AT THE SITE

11. THE PERMITTEE AND CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT WHICH HAS A LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.

12. IF FUEL OR OTHER DANGEROUS CHEMICALS ARE STORED ON SITE, THEN A PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN MUST BE DEVELOPMENT AND KEPT ON SITE.

13. PRIOR TO THE COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES FOR ADDITIONAL PHASE OR PORTION OF THE PROJECT, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR EACH ADDITIONAL PHASE OR PORTION OF THE PROJECT FOR REVIEW AND AUTHORIZATION BY THE DISTRICT.

SEEDING AND SOIL SUPPLEMENTS TABLE (FROM SECTION 804.2(b), PADOT 408 MANUAL)

FORMULA AND SPECIES	% BY WEIGHT	MINIMUM % PURITY	MINIMUM % GERMINATION	MAX. % WEED SEED	SEEDING RATE LBS. PER 1000 SY
FORMULA D – MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15					21.0 TOTAL
• TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUCKY 31)	70	98	85	0.15	15.0
• CREEPING RED FESCUE OR CHEWINGS FESCUE	30	98	85	0.15	6.0

FIRST CAPITAL ENGINEERING
48 South Richland Avenue
York, PA 17404
Phone (717) 845-FCAP
FAX (717) 852-7891
Gettysburg, PA 17325
Phone (717) 337-3827
www.FCAP.com
☆ CIVIL ENGINEERS ☆ MUNICIPAL ENGINEERS ☆ ENVIRONMENTAL SCIENTISTS ☆
☆ LANDSCAPE ARCHITECTS ☆ PLANNERS ☆ SURVEYORS ☆

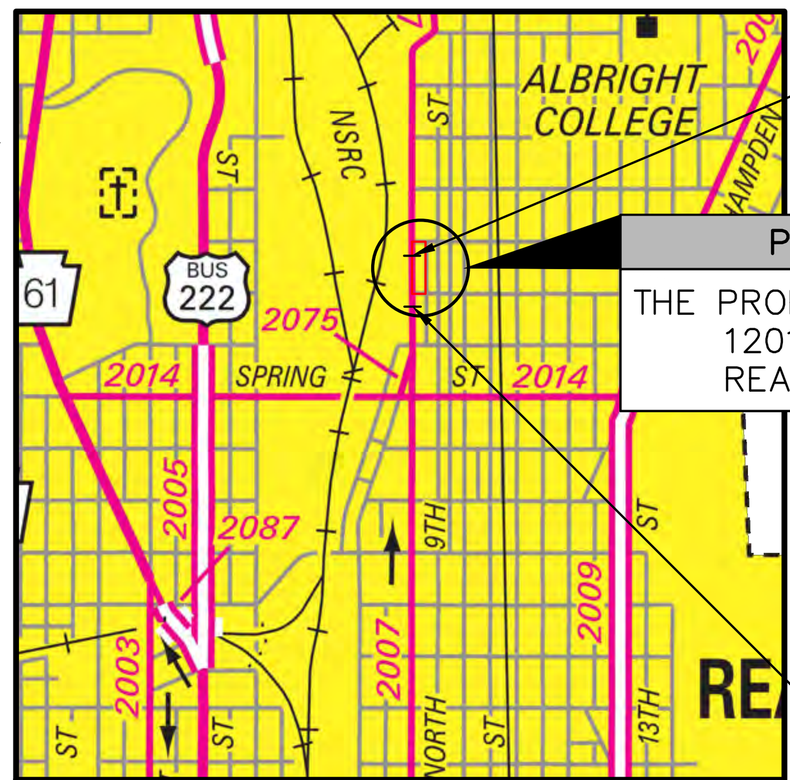
No.	DATE	REVISION	BY
1	7/19/21	REVISIONS PER CLIENT EMAIL DATED 7/16/21	ARB

MARION STREET STATION READING FIRE DEPARTMENT
EROSION & SEDIMENTATION CONTROL
FOR
CITY OF READING
ON
1201 NORTH 9TH STREET
CITY OF READING BERKS COUNTY, PENNSYLVANIA
EROSION AND SEDIMENTATION CONTROL DETAILS

DRAWN BY: ARB
CHECK BY:
CADD FILE No. 1476-1 ES-DTL2
DATE: 12-3-20
JOB No.: 1476-1
SCALE: NOTED

SHEET
ES-4

	DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
—	5–0	BERKS	–	CITY OF READING	2007	--	10



LIMIT OF WORK
S.R. 2007
STA: 102+75.02
SEG: 0050
OFFSET: 0929

PROPERTY LOCATION

THE PROPERTIES ARE LOCATED AT:
1201 N. 9TH STREET
READING, PA 19604

LIMIT OF WORK
S.R. 2007
STA: 98+66.02
SEG: 0050
OFFSET: 0520

LOCATION MAP

SCALE: 1"= 2000'

STATE ROUTE
TOWNSHP ROAD
RAILROAD

FIRST CAPITAL ENGINEERING, INC.

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DRAWINGS
FOR
CONSTRUCTION
OF
LOW VOLUME DRIVEWAY
FOR
CITY OF READING

FCE JOB # 1476–1

STATE ROUTE 2007 SECTION -- ,

IN BERKS COUNTY

FOR STA 98+66.02 TO STA 102+75.02, LENGTH 409.00 FT 0.077 MI
FROM SEG 0050 OFFSET 0520 TO SEG 0050 OFFSET 0929 .

MAY 14, 2021

SERIAL NO. 20202961643

READING AREA WATER
AUTHORITY
1801 KUTZTOWN ROAD
READING PA, 19604
ATT: ANTHONY D. REYNOLDS
PHONE: (610) 737–5449

——W——

CENTURYLINK
5095 RITTER ROAD
MECHANICSBURG, PA 17055
ATT: DANIEL COMPITELLO
PHONE: (717) 506–1600
EMAIL: DANIEL.COMPITELLO@LUMEN.COM

——OC——

VERIZON
409 WASHINGTON STREET
READING, PA 19601
ATT: JEFF KRAMER
PHONE: (610) 371–4344
EMAIL: JEFFERY.D.KRAMER@VERIZON.COM

——T——

MET–ED
2800 POTTSVILLE PIKE
READING, PA 19605
ATT: LORI LOBB
PHONE: (610) 921–6782
EMAIL: LLOBB@FIRSTENERGYCORP.COM

——E——

UGI UILITIES, INC
225 MORGANTOWN ROAD
READING, PA 19611
ATT: KURT ZIELASKOWSKI
PHONE: (610) 736–5571
EMAIL: KZIELASKOWSKI@UGI.COM

——G——

CITY OF READING
815 WASHINGTON STREET
READING, PA 19601
ATT: TIM KRALL
PHONE: (610) 655–1850
EMAIL: TIMOTHY.KRALL@READINGPA.GOV

——S——

SHEET LIST TABLE

DESIGN DESIGNATION (9TH STREET S.R. 2007)

HIGHWAY CLASSIFICATION	–	URBAN MINOR ARTERIAL/COMMUNITY ARTERIAL
DESIGN SPEED	–	35 MPH
PAVEMENT WIDTH	–	NB 20' – SB 14'
SHOULDER WIDTH	–	NB CURBED W/ 8' PARKING LANE SB CURBED W/ NO SHOULDER

TRAFFIC DATA

CURRENT ADT	–	9,738 (2021)
DESIGN YEAR ADT	–	9,754 (2022)
D.H.V.	–	975
D	–	60
T	–	2
TRUCK %	–	3

APPLICANT
CITY OF READING
815 WASHINGTON STREET
READING, PA 19601

HIGHWAY OCCUPANCY PERMIT
APPLICATION NUMBER: 238205

PA ONE CALL

PA ONE CALL ID NUMBER FOR THIS JOB IS 20202961643. LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON RECORD DRAWINGS, AND/OR SURFACE EVIDENCE ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL CONTACT THE PA ONE CALL SYSTEM (1–800–242–1776), A MINIMUM OF 3 DAYS PRIOR TO EXCAVATION AS REQUIRED BY PA ACT 287 OF 1974, AS AMENDED.

No.	DATE	REVISION	BY
1	6/21/21	PER PENNDOT LETTER, CYCLE NO. 2 DATED 6–11–21	ARB
2	7/15/21	PER PENNDOT LETTER, CYCLE NO. 3 DATED 7–15–21	ARB
3	8/19/21	PER PENNDOT LETTER, CYCLE NO. 4 DATED 8–13–21	ARB

PREPARED BY:
SURVEYOR
FIRST CAPITAL ENGINEERING, INC.
48 S. RICHLAND AVE.
YORK, PA 17404

DATE: 7/23/2021

PREPARED BY:
ENGINEER
FIRST CAPITAL ENGINEERING, INC.
48 S. RICHLAND AVE.
YORK, PA 17404

DATE: 7/23/2021

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	BERKS	2007	--	2 OF 10

CITY OF READING

No.	DATE	REVISION	BY
1	6/18/21	PER PENNDOT LETTER, CYCLE NO. 2 DATED 6-11-21	ARB
2	7/15/21	PER PENNDOT LETTER, CYCLE NO. 3 DATED 7-15-21	ARB

GENERAL NOTES

1. UTILITIES AND OTHER OBSTRUCTIONS AS SHOWN HEREON HAVE BEEN LOCATED BY ACTUAL FIELD MEASUREMENTS, SUPPLEMENTED BY INFORMATION OBTAINED FROM VARIOUS AGENCIES HAVING JURISDICTION. HOWEVER, WE DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION AND MUST NOTIFY THE PA ONE CALL SYSTEM, INC., (1-800-242-1776) A MINIMUM OF 3 DAYS PRIOR TO EXCAVATION AS REQUIRED BY PA ACT 287 OF 1974, AS AMENDED, PRIOR TO CONDUCTING ANY EXCAVATING ACTIVITIES. FIRST CAPITAL ENGINEERING, INC. IS NOT LIABLE FOR ANY DAMAGE ASSOCIATED WITH EXCAVATION ACTIVITIES BY OTHERS, OR AS A RESULT OF UNDERGROUND UTILITIES NOT BEING SHOWN HEREON, OR FOUND TO BE IN DIFFERENT LOCATIONS THAN AS SHOWN HEREON.

2. LEGAL RIGHT-OF-WAY FOR SR 2007 34' (CURB TO CURB) FROM PLAN ENTITLED MINOR SUBDIVISION OF KAY O, INC, CITY OF READING, BERKS COUNTY, PREPARED BY JOHN N HUCK, PLS, RECORDED MAY, 10 1995, RECORDER OF DEEDS, BERKS COUNTY, PA, PLAN BK 208, PG 53..

3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS GIVEN ON THESE DRAWINGS, STANDARD STATE SPECIFICATIONS, AND LOCAL MUNICIPAL AUTHORITY CONSTRUCTION AND MATERIAL SPECIFICATIONS.

4. DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT FROM THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.

5. PROPERTY LINE AND EASEMENT INFORMATION IS TAKEN FROM SURVEY DATA BY FIRST CAPITAL ENGINEERING

6. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS, THE FIGURED DIMENSION SHALL BE USED.

7. BEARINGS AND COORDINATES AS SHOWN HEREON ARE BASED ON STATE PLANE COORDINATES SYSTEM NORTH AMERICAN DATUM 83 PA SOUTH ZONE.

8. ELEVATIONS AS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 88.

9. ELEVATIONS AS SHOWN ARE BASED ON GPS OBSERVATIONS ON PT#101 MAG NAIL SET IN ASPHALT @ SOUTHEAST CORNER OF 9TH AND MARION STREETS, ELEVATION 261.12 NAVD 1988.

   SITE BM1 FLANGE BOLT "X-CUT" ON FIRE HYDRANT, NORTHEAST CORNER OF 9TH AND MARION STREETS, ELEVATION 261.49

   SITE BM2 FLANGE BOLT "X-CUT" ON FIRE HYDRANT, NORTHWEST CORNER OF 9TH AND MOSS STREETS, ELEVATION 264.77

10. THE PERMITTEE SHALL ENSURE THAT THE SIGHT DISTANCE AT THE DRIVEWAYS SERVICING OTHER PROPERTIES OR AT OTHER INTERSECTIONS IS NOT REDUCED [UNLESS EXISTING AND PROPOSED VALUES EXCEED THE ACCEPTABLE VALUES SPECIFIED IN PENNSYLVANIA CODE {67 PA CODE i 441.8(h)(2)(iv)}] AS A RESULT OF THE WORK PERFORMED IN ACCORDANCE WITH THE STATE HIGHWAY OCCUPANCY PERMIT.

11. DETAILS OTHER THAN THOSE INDICATED ARE ON STANDARD DRAWINGS:

RC-64M CURBS AND GUTTERS	FEB. 19, 2021
RC-67M CURB RAMPS AND SIDEWALKS (TYPE 1A DRIVEWAY APRON)	FEB. 19, 2021
TC-8600 PAVEMENT MARKINGS	JUNE 13, 2013
TC-8702B POST-MOUNTED SIGNS, TYPE B	JUNE 13, 2013
TC-8717 TYPE III BARRICADE	JUNE 13, 2013

12. THE PERMITTEE MUST CONTACT THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 AT LEAST THREE WORKING DAYS PRIOR TO THE START OF EXCAVATION OR DEMOLITION WORK TO HAVE ALL UNDERGROUND UTILITIES MARKED IN THE WORK AREA. SERIAL NUMBER ____________ FOR CITY OF READING.

13. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPROPRIATE SHALL BE ERADICATED BY THE PERMITTEE. THE PERMITTEE SHALL PLACE ALL REQUIRED NEW PAVEMENT MARKINGS.

14. ALL PAVEMENT MARKING PLACEMENTS ON THE STATE HIGHWAY SHALL COINCIDE WITH TC-8600 DATED JUNE 13, 2013.

15. ALL PAVEMENT MARKINGS OTHER THAN LONGITUDINAL LINES TO BE HOT THERMOPLASTIC.

16. ACCESS SIGNING AND PAVEMENT MARKINGS AUTHORIZED BY THE PERMIT MUST BE MAINTAINED BY THE PERMITTEE.

17. ALL WORK WITHIN THE PA STATE HIGHWAY RIGHT-OF-WAY IS TO BE PERFORMED CONSISTENT WITH THE FOLLOWING:
    - PENNDOT PUBLICATION 13M, DESIGN MANUAL PART 2 HIGHWAY DESIGN
    - PENNDOT PUBLICATION 34, APPROVED AGGREGATE PRODUCERS (BULLETIN 14)
    - PENNDOT PUBLICATION 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15)
    - PENNDOT PUBLICATION 41, PRODUCERS OF BITUMINOUS MATERIALS (BULLETIN 41)
    - PENNDOT PUBLICATION 42, PRODUCERS OF READY-MIX CONCRETE (BULLETIN 42)
    - PENNDOT PUBLICATION 46, TRAFFIC ENGINEERING MANUAL
    - PENNDOT PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION;
    - PENNDOT PUBLICATION 111, PAVEMENT MARKINGS AND SIGNING STANDARDS;
    - PENNDOT PUBLICATION 212, OFFICIAL TRAFFIC CONTROL DEVICES;
    - PENNDOT PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES;
    - PENNDOT PUBLICATION 408, SPECIFICATIONS;

18. ALL WORK PERFORMED WITHIN THE STATE LEGAL RIGHT-OF-WAY MUST IN ACCORDANCE WITH PENNDOT PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION, RC-0M TO RC-100M, AS AMENDED.

GENERAL NOTES (CONTINUED)

19. THE EXISTING SPEED LIMIT ON S.R. 2007 IS 30 M.P.H.

20. THE RIGHT-OF-WAY IS FREE ACCESS.

21. THE DRIVEWAY HAS BEEN DESIGNED (AND WILL BE CONSTRUCTED AND MAINTAINED) CONSISTENT WITH TITLE 67, CHAPTER 441 REGULATIONS

22. PA STATE RIGHT-OF-WAY MAY NOT BE USED FOR PARKING.

23. PERMITTEE IS RESPONSIBLE FOR MAINTENANCE OF ALL AUTHORIZED SIGNS AND PAVEMENT MARKINGS.

24. PERMITTEE IS RESPONSIBLE FOR MAINTENANCE OF ALL AUTHORIZED STRUCTURES, FACILITIES, AND DRAINAGE.

25. ANTICIPATED AVERAGE DAILY TRAFFIC (ADT) FOR THE ACCESS TO S.R. 2007 IS: 16 CARS AND 19 TRUCKS AND 0 BUSES, TOTAL ADT 35.

26. THE PERMITTEE IS RESPONSIBLE FOR THE COORDINATION OF RELOCATING ANY CONFLICTING UTILITIES WHICH ARE A RESULT OF THESE IMPROVEMENTS.

27. STRUCTURAL STEEL BICYCLE SAFE GRATES SHALL BE PROVIDED FOR ALL INLETS WITHIN THE ROADWAY PAVEMENT OF THOSE THAT MAY RECEIVE BICYCLE TRAFFIC PER PENNDOT DESIGN MANUAL, PART 2, CHAPTER 10.

28. THE PROPOSED PAVEMENT SECTION MUST BE AS INDICATED ON THE PLAN, OR MATCH THE EXISTING AS FOUND IN THE FIELD, WHICHEVER IS GREATER.

29. DISTANCE TO THE NEAREST INTERSECTION IS: RT-437', LT-103'.
    DISTANCE TO THE NEAREST OPPOSITE DRIVEWAY IS: RT-32', LT-52'.
    DISTANCE TO THE NEAREST ADJACENT DRIVEWAY IS: RT-1,120', LT-1,113'.

30. THIS PERMIT MAY BE RESTRICTED ON WORKING HOURS AND TIMES FOR HOLIDAYS, WEEKENDS, AND SPECIAL OR UNFORESEEN EVENTS AND WILL REQUIRE APPROVAL FROM THE COUNTY OFFICE PRIOR TO WORKING DURING THESE PERIODS.

31. THE PERMITTEE'S CONTRACTOR SHALL SAWCUT AND REMOVE SHOULDER MATERIAL AS NECESSARY TO ENSURE THE PAVEMENT REPLACEMENT IS ADJACENT TO THE FULL-DEPTH PAVEMENT OF THE TRAVEL LANE.

32. FINAL APPROVAL OF THE PROPOSED SAWCUT LOCATION WILL BE AT THE DISCRETION OF THE INSPECTOR-IN-CHARGE AND WILL BE CONFIRMED AT THE PRE-CONSTRUCTION MEETING. IF THE SAWCUT MUST BE LOCATED WITHIN A TRAVEL LANE, IT WILL BE NECESSARY TO MILL AND OVERLAY THE TRAVEL LANE TO PREVENT A JOINT IN A WHEEL PATH.

33. MATCH EXISTING PAVEMENT MARKINGS AT THE LIMITS OF WORK.

34. MATERIAL CERTIFICATION MUST BE PROVIDED, BY AN APPROVED MANUFACTURER LISTED IN THE DEPARTMENT'S PUBLICATION 35 (BULLETIN 15), FOR ALL MATERIALS AND STRUCTURES WITHIN PENNDOT RIGHT-OF-WAY.

35. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS, INCLUDING THOSE THAT ARE OUTSIDE OF PENNDOT LEGAL RIGHT-OF-WAY, SHALL BE CONTRCUTED TO COMPLY WITH THE REQUIREMENTS OF THE U.S. ACCESS BOARD, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) OF THE ACCESSIBILITY GUIDELINES OF BUILDINGS AND FACILITIES (ADAAG). PENNDOT DESIGN MANUAL PART 2, CHAPTER 6, AND PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION (PENNDOT PUBLICATION 72M, RC-67M) PROVIDE GUIDANCE ON ADA ACCESSIBLE DESIGN FOR PEDESTRIAN FACILITIES AND CAN BE UTILIZED FOR REFERENCE.

36. ALL SLOPE MEASUREMENTS WILL BE INSPECTED/VERIFIED WITH A 2-FOOT SMART LEVEL.

37. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF THE CONSTRUCTION.

38. MODIFICATIONS TO EXISTING DRAINAGE STRUCTURES MAY RESULT IN THE NEED TO REPLACE THE STRUCTURE. REPLACEMENT WILL BE AT THE DISCRETION OF THE INSPECTOR-IN-CHARGE.

39. THE RESPONSIBILITY FOR ENSURING THAT ALL UTILITY POLES WITHIN THE PROPOSED PAVING ARE RELOCATED OUTSIDE OF PAVED AREAS AND SHOULDERS SHALL BE THAT OF THE PERMITTEE. THE UTILITY POLES MUST BE RELOCATED BEFORE THE START OF ANY PAVING OPERATIONS.

40. THE PERMITTEE IS RESPONSIBLE FOR THE COORDINATION OF RELOCATING ANY CONFLICTING UTILITIES WHICH ARE A RESULT OF THESE IMPROVEMENTS.

41. ALL UTILITY RELOCATION PERMITS TAKE PRECEDENCE OVER THE UTILITY RELOCATION POSITIONS SHOWN ON THE HOP PLANS.

42. THE CONTRACTOR SHALL SAWCUT AND REMOVE SHOULDER MATERIAL AS NECESSARY TO ENSURE THE PAVEMENT REPLACEMENT IS ADJACENT TO THE FULL-DEPTH PAVEMENT OF THE TRAVEL LANE.

43. ANY EXISTING ROADWAY PAVEMENT MARKINGS THAT ARE REMOVED AS A RESULT OF DRIVEWAY CONSTRUCTION MUST BE REPLACED AND MATCH EXISTING PAVEMENT MARKINGS AT THE LIMITS OF WORK.

44. IF THE PROPOSED IMPROVEMENTS REQUIRE THE RELOCATION OF PENNDOT FIBER OPTIC CABLE(S), THE PERMITTEE IS RESPONSIBLE FOR THE FULL EXPENSE OF RELOCATING THESE FACILITIES. ANY FIBER OPTIC CABLE THAT REQUIRES RELOCATION MUST BE MOVED BY A CONTRACTOR CERTIFIED BY PENNDOT TO PERFORM THIS TYPE OF WORK.

45. AVAILABLE SIGHT DISTANCES LISTED ASSUME THAT BILL 48-2021 AN ORDINANCE PROVIDING FOR NO PARKING RESTRICTIONS APPROVED BY THE CITY OF READING ON JULY 2, 2021 ARE IMPLEMENTED.

WORK ZONE TRAFFIC CONTROL NOTES

1. MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE PATA DRAWINGS 101-A, 216 AND LONG-TERM PATA 201-A IN THE CURRENT PENNDOT PUBLICATION 213, "WORK ZONE TRAFFIC CONTROL GUIDELINES".

2. ALL WZTC SIGNAGE SHALL BE TYPE III SHEETING.

3. USE "ROAD WORK" LEGEND IN LIEU OF "ROAD CONSTRUCTION" LEGEND ON ALL APPLICABLE SIGNS.

4. REMOVE ALL SHORT-TERM WZTC SIGNAGE UPON COMPLETION OF THAT DAY'S WORK PERIOD.

5. NO TRAFFIC RESTRICTIONS OR LANE CLOSURES ARE PERMITTED BETWEEN THE HOURS OF 6:00 AM AND 9:00 AM AND BETWEEN 3:00 PM AND 6:00 PM, MONDAY THROUGH FRIDAY, OR ON LEGAL HOLIDAYS AND WEEKENDS ASSOCIATED WITH LEGAL HOLIDAYS. ALL RESTRICTIONS AND CLOSURES ARE TO BE REMOVED BY NOON ON THE DAY PRIOR TO THE LEGAL HOLIDAY.

6. DO NOT STOP TRAFFIC FLOW WITHIN THE AREA FOR MORE THAN 5 MINUTES AT ANY ONE TIME.

7. THE CONTRACTOR SHALL COMPLY WITH ACT 229 OF DECEMBER 2002 DURING CONSTRUCTION ACTIVITIES WITHIN PENNDOT'S RIGHT-OF-WAY.

8. THIS WORKS CONSISTS OF MAINTENANCE OF TRAFFIC AND PROTECTION OF THE TRAVELING PUBLIC WHEN APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION.

9. FURNISH, ERECT, PLACE, AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION AND AT ALL OTHER TIMES CONSISTENT WITH THE METHODS INDICATED ON THESE DRAWINGS AND THE FOLLOWING:
   - PENNDOT PUBLICATION NO. 35;
   - PENNDOT PUBLICATION NO. 46;
   - PENNDOT PUBLICATION NO. 72M;
   - PENNDOT PUBLICATION NO. 111;
   - PENNDOT PUBLICATION NO. 212;
   - PENNDOT PUBLICATION NO. 213;
   - PENNDOT PUBLICATION NO. 236;
   - PENNDOT PUBLICATION NO. 408; AND
   - MUTCD, CURRENT EDITION.

10. REMOVE THESE DEVICES IMMEDIATELY UPON COMPLETION OF THE WORK. THE DEPARTMENT WILL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY DEPARTMENT FORCES.

11. PERMITTEE MUST ARRANGE FOR INSPECTION OF ALL TRAFFIC CONTROL DEVICES PRIOR TO START OF WORK.

12. COVER OR REMOVE ALL CONFLICTING SIGNS AND ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.

13. MOUNT ALL LONG TERM ADVANCE WARNING SIGNS ON TYPE III BARRICADES UNLESS OTHERWISE NOTED OR INSTRUCTED BY DISTRICT OFFICE.

14. ALL SIGNS AND TRAFFIC CONTROL DEVICES ARE TO BE IN NEW CONDITION AND MAINTAINED.

15. DRIVEWAYS WILL BE KEPT ACCESSIBLE AT ALL TIMES. LOCATE ALL SIGNS SO THAT SIGHT DISTANCES WILL NOT BE OBSTRUCTED AT DRIVEWAYS AND LOCAL ROADS.

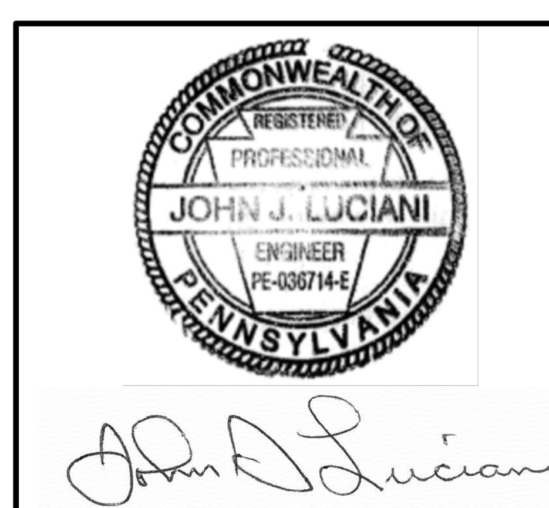
16. ALL CHANNELIZING DEVICES, BARRICADES, AND SIGNS SHALL HAVE TYPE III OR BETTER PRISMATIC RETROREFLECTIVE SHEETING. SHEETING SHALL BE APPROVED AND LISTED IN PENNDOT PUBLICATION 35 (BULLETIN 15).

17. PERMITTEE SHALL NOTIFY LOCAL EMERGENCY AUTHORITIES, AFFECTED BUSINESSES, SCHOOL DISTRICT(S), THE GENERAL PUBLIC, THE DISTRICT PERMIT MANAGER AND THE DISTRICT APRAS COORDINATOR AT LEAST FOURTEEN DAYS PRIOR TO ANY SIGNIFICANT TRAFFIC IMPACTS.

18. NOTIFY THE LOCAL MUNICIPALITY WHERE SIGNALIZED INTERSECTIONS FALL WITHIN THE WORK ZONE. DO NOT FLAG A SIGNALIZED INTERSECTION WITHOUT THE MUNICIPALITY PLACING THE SIGNAL ON FLASH.

19. IF A TRAFFIC SIGNAL IS WITHIN 500 FEET OF THE SITE, CALL THE DISTRICT TRAFFIC ENGINEER AT LEAST 3 DAYS PRIOR TO THE START OF WORK.

20. RESTRICTING TRAFFIC FLOW WITHIN THE WORK AREA SHALL BE MINIMIZED TO PREVENT TRAFFIC CONGESTION AND UNSAFE TRAFFIC CONDITIONS.



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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476-1	1476-1 HOP NOTE	NOTED

GENERAL NOTES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5–0	BERKS	2007	--	3 OF 10

CITY OF READING

No.	DATE	REVISION	BY
1	6/18/21	PER PENNDOT LETTER, CYCLE NO. 2 DATED 6–11–21	ARB
2	~~7/15/21~~	~~PER PENNDOT LETTER, CYCLE NO. 3 DATED 7–15–21~~	~~ARB~~
3	8/19/21	PER PENNDOT LETTER, CYCLE NO. 4 DATED 8–13–21	ARB

M–950S
(03–04)
PENNDOT

DRIVEWAY SIGHT DISTANCE MEASUREMENTS

(FOR LOCAL ROADS, USE PENNDOT PUB 70)

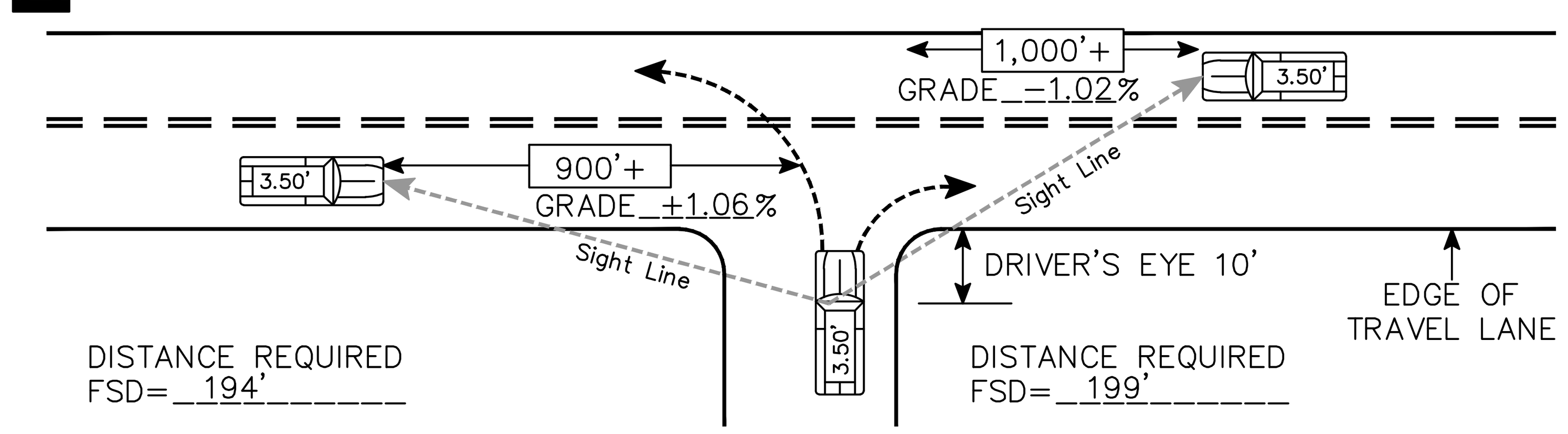
APPLICANT CITY OF READING APPLICATION NO. 238205

S.R. 2007 SEG. 0050 OFFSET 0757 LEGAL SPEED LIMIT 30 MPH

MEASURED BY FIRST CAPITAL ENGINEERING DATE 9/20

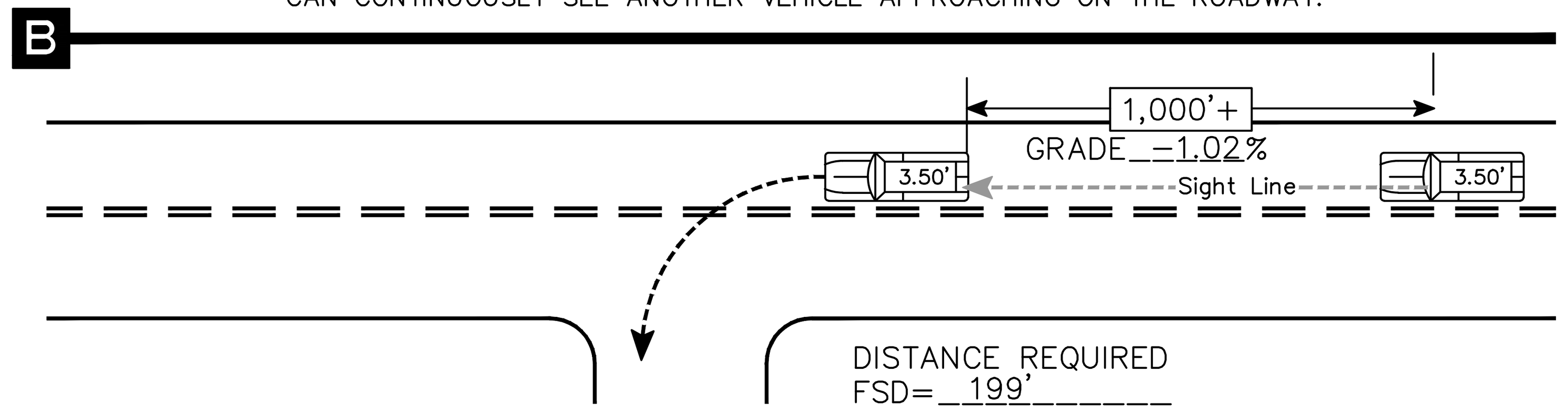
FOR DEPARTMENT USE ONLY: Safe–Running Speed ____________ 85th Percentile Speed____________

A



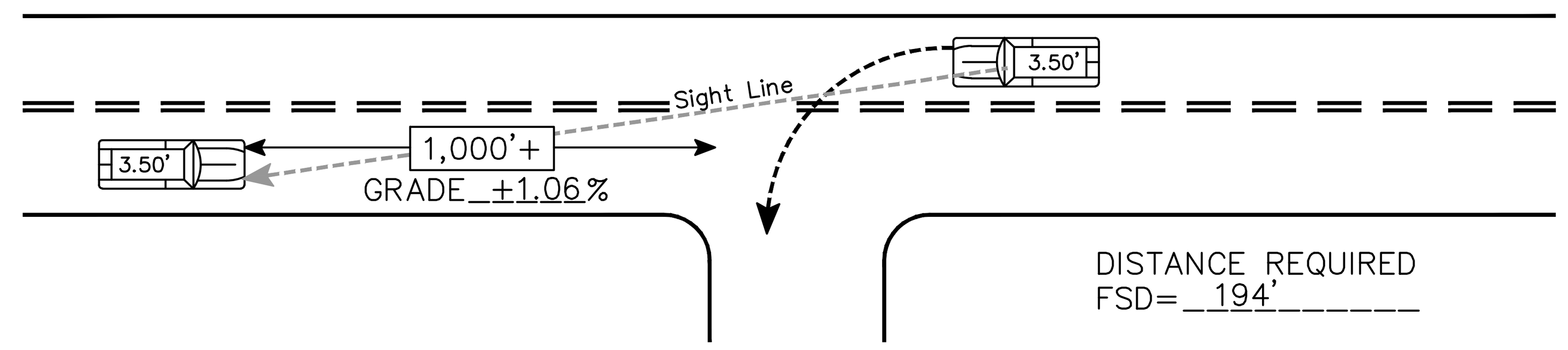
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B

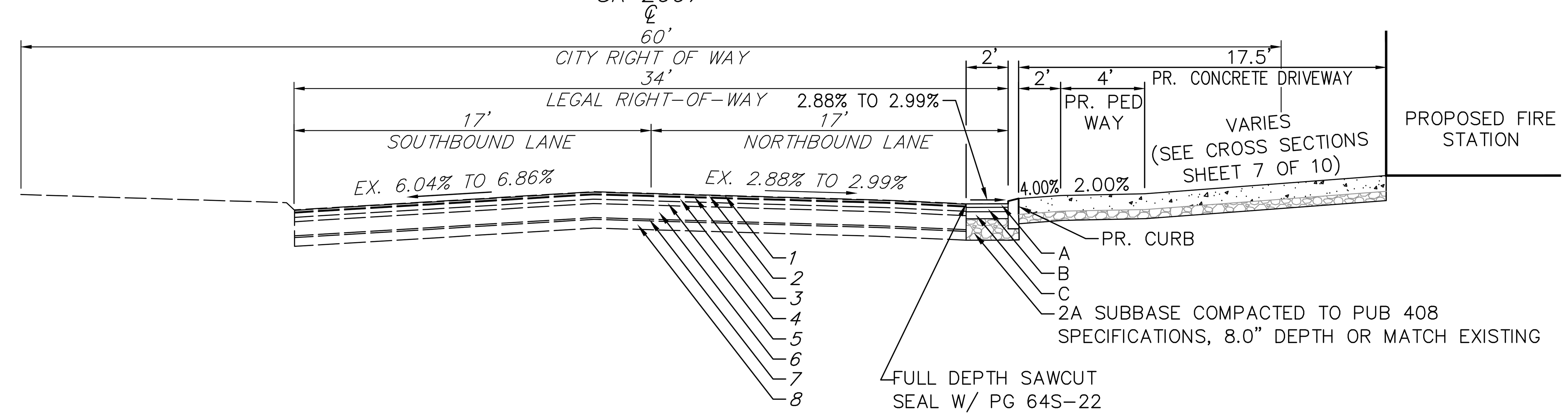


THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVER'S TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO DRIVEWAY.

C



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.



SUPERPAVE PENNDOT PAVEMENT DETAIL (S.R. 2007)
SEGMENT 0050, OFFSET 0730 TO OFFSET 0780

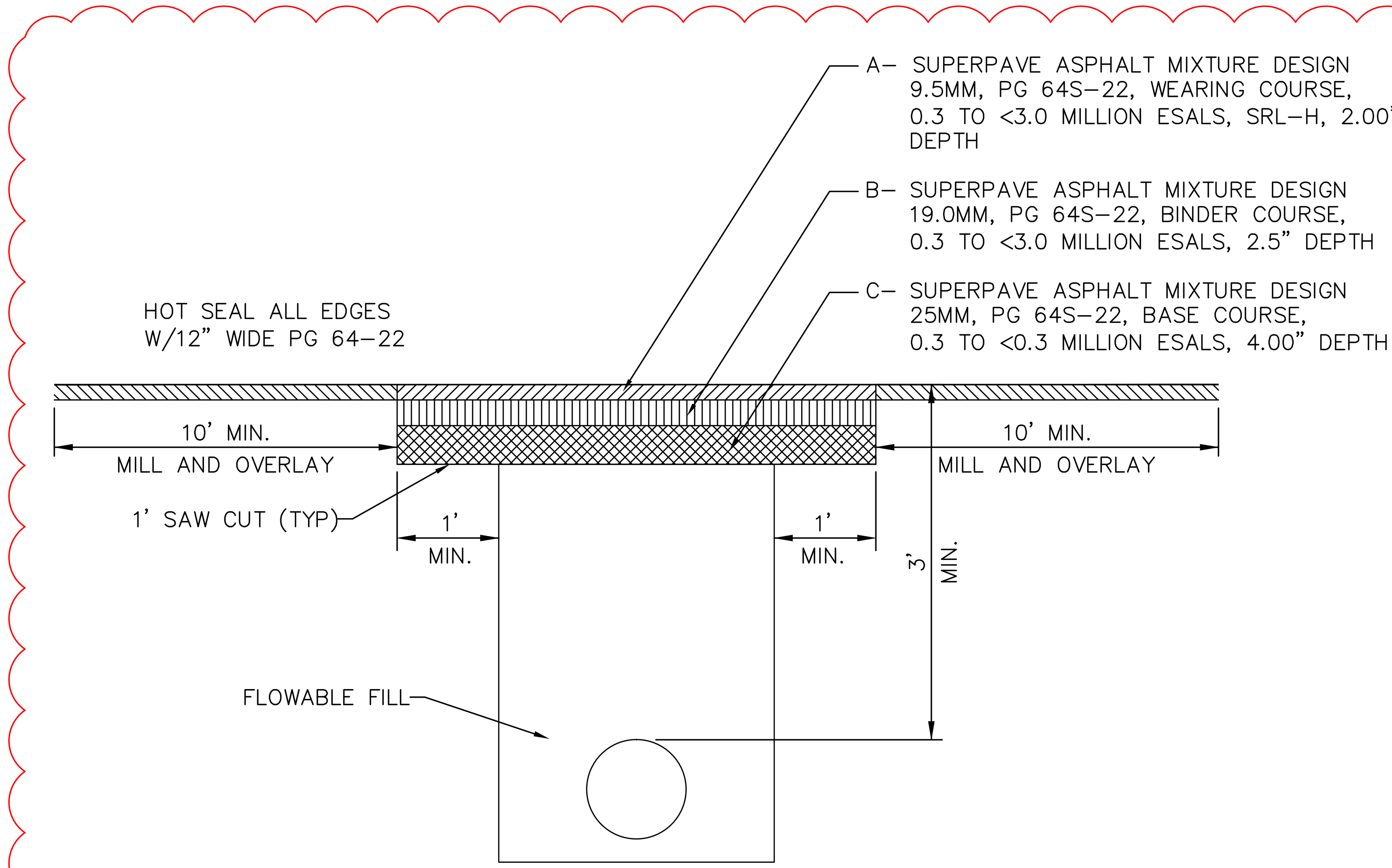
A– SUPERPAVE ASPHALT MIXTURE DESIGN 9.5MM, PG 64S–22, WEARING COURSE, 0.3 TO <3.0 MILLION ESALS, SRL–H, 2.00" DEPTH

B– SUPERPAVE ASPHALT MIXTURE DESIGN 19.0MM, PG 64S–22, BINDER COURSE, 0.3 TO <3.0 MILLION ESALS, 2.5" DEPTH

C– SUPERPAVE ASPHALT MIXTURE DESIGN 25MM, PG 64S–22, BASE COURSE, 0.3 TO <0.3 MILLION ESALS, 4.00" DEPTH

S.R. 2007 FULL WIDTH TYPICAL SECTION

NOT TO SCALE



NOTE:

1. MATCH EXISTING DEPTHS IF GREATER.
2. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 409.3(g).
3. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL RECOMPACT SUBBASE, TACK COAT ALL VERTICAL EDGES, INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.

FLEXIBLE PAVEMENT RESTORATION

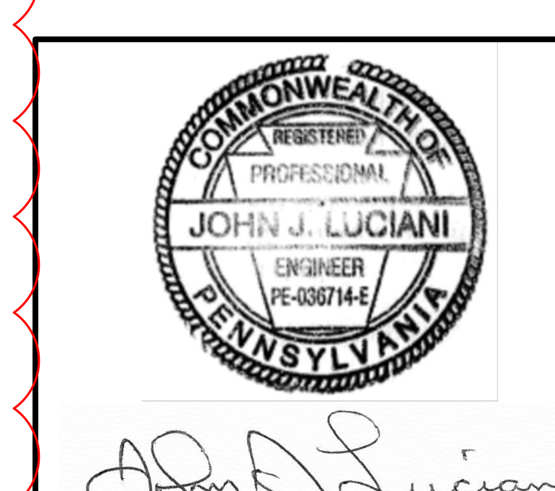
NOT TO SCALE

S.R. 2007 EXISTING PAVEMENT SECTION

1. *SURFACE TREATMENT, 2010*
   0.25" DEPTH, 34' WIDTH
2. *BITUMINOUS WEARING COURSE ID–2, 1998*
   1.0" DEPTH, 34' WIDTH
3. *SCRATCH BIT WEAR COURSE ID–2, 1998*
   0.50" DEPTH, 34' WIDTH

   MILLING (AVERAGE DEPTH), 1998
   –1.5" DEPTH, 34' WIDTH
4. *BITUMINOUS WEARING COURSE ID–2, 1971*
   2.5" DEPTH, 34' WIDTH
5. *UNKNOWN BITUMINOUS WEARING COURSE, 1948*
   2.5" DEPTH, 9' WIDTH
6. *PLAIN CEMENT CONCRETE BASE COURSE, 1948*
   8.0" DEPTH, 9' WIDTH
7. *UNKNOWN BITUMINOUS WEARING COURSE, 1948*
   1.0" DEPTH, 25' WIDTH
8. *UNKNOWN BASE COURSE, 1948*
   5.0" DEPTH, 25' WIDTH

SOURCE: PENNDOT PAVEMENT HISTORY WEBSITE – https://gis.penndot.gov/PavementHistory/



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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476–1	1476–1 HOP DETAIL	N.T.S.

DETAIL SHEET

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5–0	BERKS	2007	--	4 OF 10

CITY OF READING

No.	DATE	REVISION	BY
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2	7/15/21	PER PENNDOT LETTER, CYCLE NO. 3 DATED 7–15–21	ARB

LEGEND

ADJOINING PROPERTY LINE
EASEMENT LINE
CENTER LINE
BUILDING SETBACK LINE
EXISTING GRADES
EXISTING INDEX GRADES
EXISTING CURB
EXISTING DRAINAGE
EXISTING OVERHEAD ELECTRIC
EXISTING UNDERGROUND ELECTRIC
EXISTING OVERHEAD TELEPHONE
EXISTING UNDERGROUND TELEPHONE
EXISTING NATURAL GAS
EXISTING SANITARY SEWER
EXISTING WATER
EXISTING FENCE
EXISTING GUIDERAIL
PROPERTY LINE
RIGHT–OF–WAY
ZONING BOUNDARY
EXISTING TREE LINE
EXISTING UTILITY POLE
EXISTING GUY WIRE
EXISTING ELECTRIC MANHOLE
EXISTING GAS MANHOLE
EXISTING SANITARY SEWER MANHOLE
EXISTING STORM DRAIN MANHOLE
EXISTING TELEPHONE MANHOLE
EXISTING WATER MANHOLE
EXISTING ELECTRIC BOX
EXISTING TELEPHONE BOX
EXISTING CABLE BOX
EXISTING GAS VALVE
EXISTING GAS METER
EXISTING WATER VALVE
EXISTING FIRE HYDRANT
EXISTING INLET
EXISTING LIGHT POLE
EXISTING STREET SIGN
EXISTING CONCRETE SIDEWALK

EXISTING SANITARY MANHOLE TABLE

ID	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. SAN. MH. 1	266.88	257.73	257.58	–	257.53	–
EX. SAN. MH. 3	261.37	251.47	–	–	251.37	–
EX. SAN. MH. 4	258.21	248.01	–	–	247.91	–
EX. SAN. MH. 5	258.36	247.36	–	–	247.21	–
EX. SAN. MH. 6	261.53	252.33	252.13	252.01	251.93	–
EX. SAN. MH. 7	262.48	254.33	253.43	–	253.43	–

EXISTING STORM STRUCTURE TABLE

ID	GRATE ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	BTM. ELE.
EX. DMH 1	266.89	260.24	259.42	–	259.29	–
EX. DMH 2	266.67	259.82	259.57	259.07	259.02	–
EX. DMH 3	263.76	256.21	256.04	–	255.91	–
EX. INLET 1	261.08	–	–	–	257.88	–
EX. INLET 2	261.38	–	–	–	257.98	–
EX. DMH 4	261.54	257.54	257.24	–	256.84	–
EX. INLET 3	260.50	–	–	–	257.30	–
EX. INLET 4	261.06	–	–	–	257.39	–
EX. DMH 5	261.35	253.25	253.20	–	253.15	–
EX. DMH 6	260.99	256.29	–	–	255.79	–
EX. DMH 7	261.65	254.65	–	–	254.55	–
EX. DMH 8	–	–	–	–	–	–

(1) N/F
MARGARITA NUNEZ
DEED BOOK -- PAGE --
INSTRUMENT NO. 2015005471
#1162 N 9TH STREET

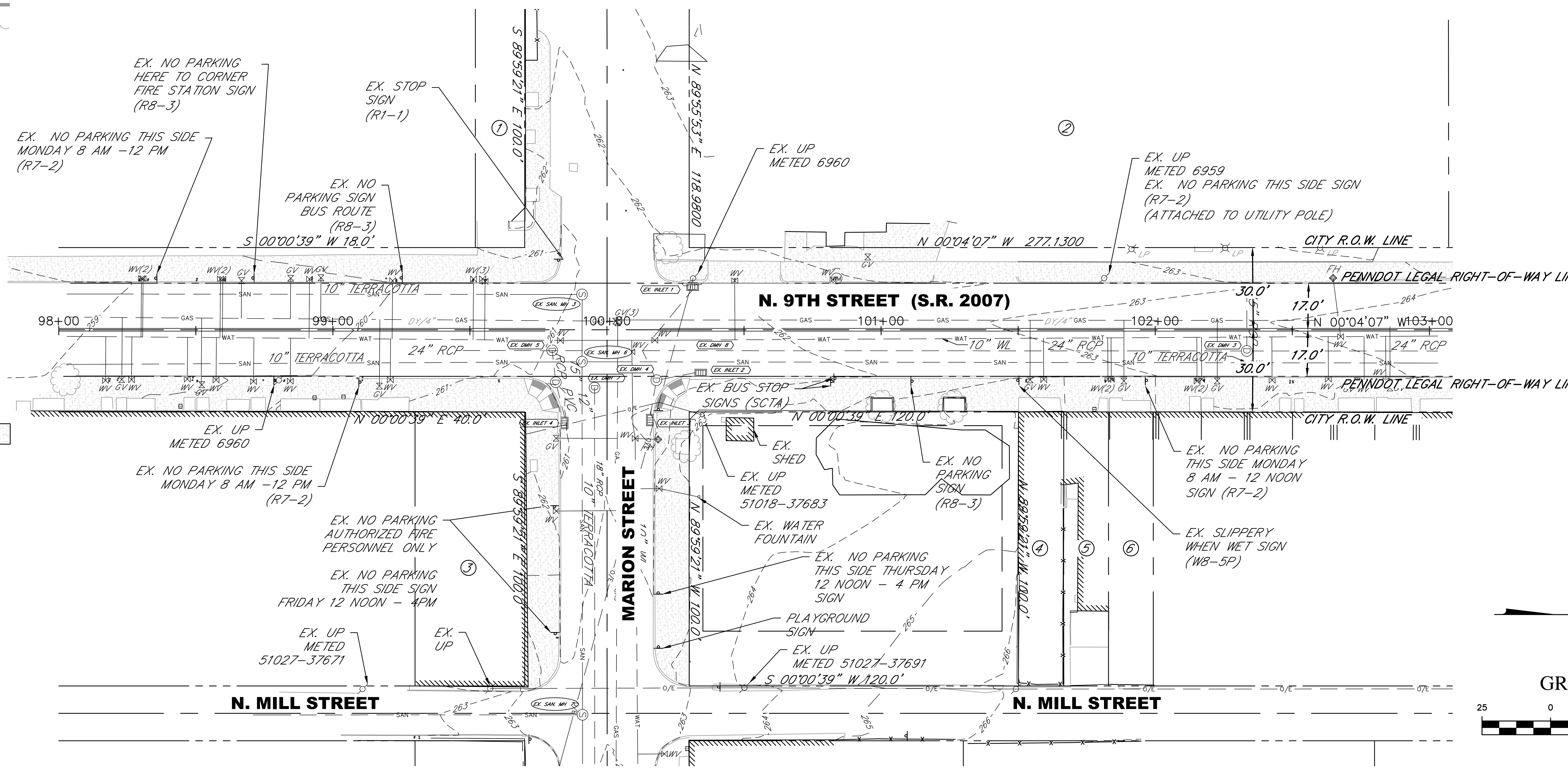
(2) N/F
TREMILLO MARIO VAZQUEZ &
VAZQUEZ NORA
DEED BOOK -- PAGE --
INSTRUMENT NO. 2011002903
#1200 N 9TH STREET

(3) N/F
CITY OF READING
DEED BOOK 156 PAGE 339
INSTRUMENT NO. 5000118218
#1155 N 9TH STREET

(4) N/F
ARIASRIVAS MARIA L &
ESCALANTE JOSE L
DEED BOOK -- PAGE --
INSTRUMENT NO. 2014008077
#1215 N 9TH STREET

(5) N/F
CARBAJAL HECTOR MONTES &
SANCHEZ YOLANDA
DEED BOOK -- PAGE --
INSTRUMENT NO. 2018021483
#1213 N 9TH STREET

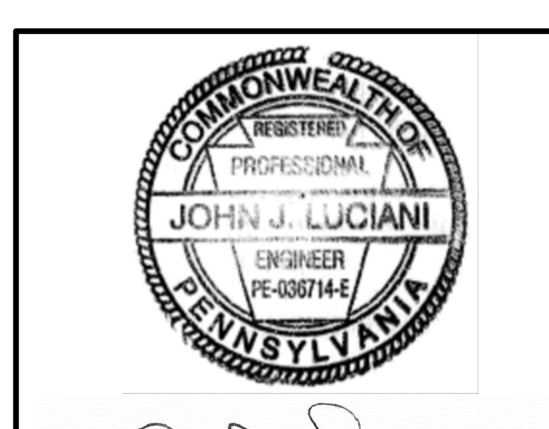
(6) N/F
ABIYE ALEMAYEHU
DEED BOOK 4588 PAGE 487
INSTRUMENT NO. 2005028367
#1217 N 9TH STREET



GRAPHIC SCALE

25 0 25 50 75

SCALE 1" = 25'



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ARB	5/14/2021	1476–1	1476–1 HOP EXC	1"=25'

EXISTING CONDITIONS PLAN

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5–0	BERKS	2007	––	5 OF 10

CITY OF READING

No.	DATE	REVISION	BY
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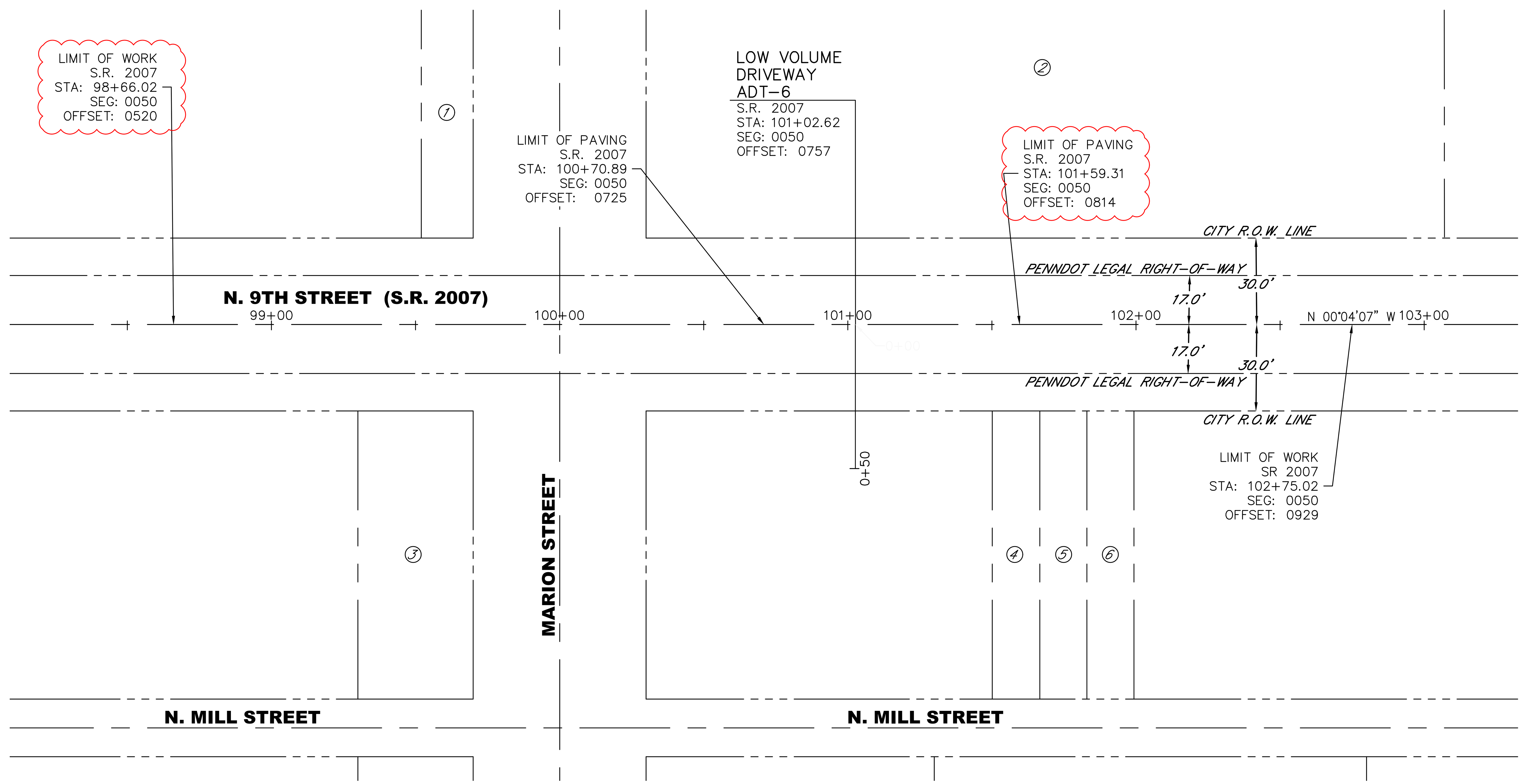
LEGEND

ADJOINING PROPERTY LINE

RIGHT–OF–WAY

CENTER LINE



N/F
MARGARITA NUNEZ
(1) *DEED BOOK –– PAGE ––*
INSTRUMENT NO. 2015005471
#1162 N 9TH STREET

N/F
TREMILLO MARIO VAZQUEZ &
VAZQUEZ NORA
(2) *DEED BOOK –– PAGE ––*
INSTRUMENT NO. 2011002903
#1200 N 9TH STREET

N/F
CITY OF READING
(3) *DEED BOOK 156 PAGE 339*
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N/F
ABIYE ALEMAYEHU
(6) *DEED BOOK 4588 PAGE 487*
INSTRUMENT NO. 2005028367
#1217 N 9TH STREET

GRAPHIC SCALE

25 0 25 50 75

SCALE 1" = 25'

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN J. LUCIANI ENGINEER PE-036714-E

7/23/2021

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ARB	5/14/2021	1476–1	1476–1 HOP GEO	1"=25'

BASELINE GEOMETRY PLAN

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	BERKS	2007	--	6 OF 10

CITY OF READING

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LEGEND

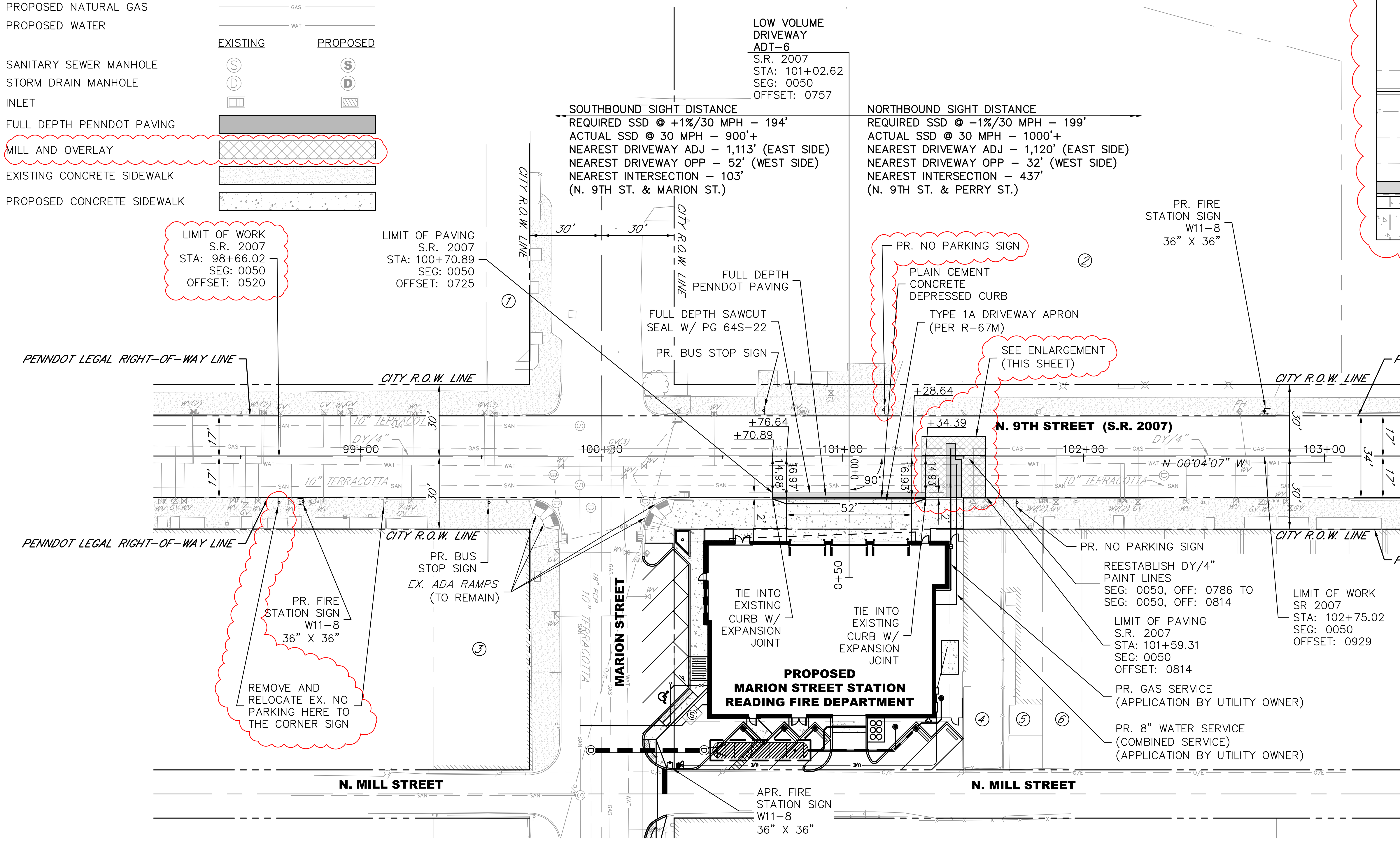
- ADJOINING PROPERTY LINE
- EASEMENT LINE
- CENTER LINE
- EXISTING CURB
- EXISTING DRAINAGE
- EXISTING OVERHEAD ELECTRIC (O/E)
- EXISTING UNDERGROUND ELECTRIC (U/E)
- EXISTING OVERHEAD TELEPHONE (O/T)
- EXISTING UNDERGROUND TELEPHONE (U/T)
- EXISTING NATURAL GAS (GAS)
- EXISTING SANITARY SEWER (SAN)
- EXISTING WATER (WAT)
- PROPERTY LINE
- RIGHT-OF-WAY
- PROPOSED CURB
- PROPOSED DRAINAGE
- PROPOSED SANITARY SEWER (SAN)
- PROPOSED UNDERGROUND ELECTRIC (U/E)
- PROPOSED NATURAL GAS (GAS)
- PROPOSED WATER (WAT)

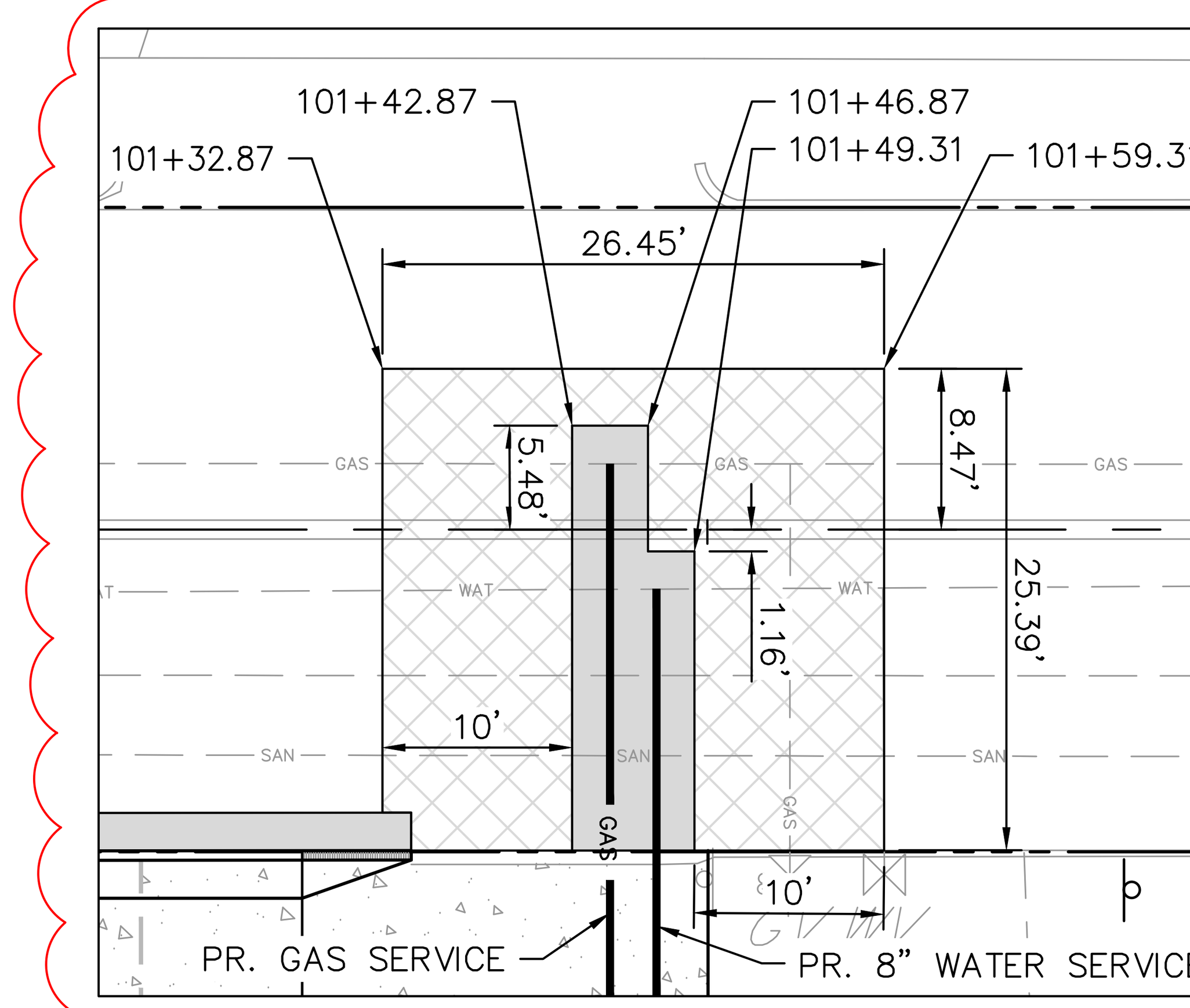
EXISTING / PROPOSED

- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- INLET
- FULL DEPTH PENNDOT PAVING
- MILL AND OVERLAY
- EXISTING CONCRETE SIDEWALK
- PROPOSED CONCRETE SIDEWALK

Sign Data Spreadsheet

Owner P -- PennDOT M - Municipality Permit # (Leave blank until issued)	IN ---- Install New RI ---- Replace Installation REL - Relocate Installation RM -- Remove ER --- Existing to remain	SR	Description / Nomenclature	Sign Type / Description	Segment	Offset	Width	Height	Ascending / Descending / Intersection	Left / Right / Overhead
M	REL	2007	SPECIAL	NO PARKING HERE TO CORNER	0050	0520	12"	18"	A	R
M	IN	2007	W11-8	FIRE STATON SIGN	0050	0529	36"	36"	A	R
M	RM	2007	SPECIAL	NO PARKING HERE TO CORNER	0050	0564	12"	18"	A	R
M	ER	2007	SPECIAL	NO PARKING ANY TIME	0050	0579	12"	18"	D	R
M	ER	2007	R7-107A	NO PARKING BUS STOP	0050	0579	12"	18"	D	R
M	IN	2007	SCTA	BUS STOP	0050	0607	12"	18"	A	R
M	ER	2007	R1-1	STOP SIGN	0050	0636	36"	36"	I	L
M	ER	2007	R1-1	STOP SIGN	0050	0673	36"	36"	I	R
M	IN	2007	W11-8	FIRE STATON SIGN @ N. MILL ST. AND MARRION ST.	0050	0678	36"	36"	D	R
M	IN	2007	SCTA	BUS STOP	0050	0721	12"	18"	D	R
M	RM	2007	SCTA	BUS STOP	0050	0736	12"	18"	A	R
M	RM	2007	R7-2	NO PARKING THIS SIDE 8AM-NOON	0050	0765	12"	18"	A	R
M	IN	2007	R7-107A	NO PARKING BUS STOP	0050	0771	12"	18"	A	R
M	ER	2007	W8-5P	SLIPPERY WHEN WET	0050	0804	36"	36"	A	R
M	IN	2007	R7-302R	NO PARKING SYMBOL/ARROW	0050	0826	12"	18"	A	R
M	ER	2007	SPECIAL	NO PARKING THIS SIDE	0050	0836	12"	18"	D	R
M	ER	2007	R7-2	NO PARKING THIS SIDE 8AM-NOON	0050	0851	12"	18"	A	R
M	IN	2007	W11-8	FIRE STATON SIGN	0050	0929	36"	36"	D	R





UTILITY CROSSING ENLARGEMENT
SCALE: 1"=10'

1. N/F MARGARITA NUNEZ, DEED BOOK -- PAGE --, INSTRUMENT NO. 2015005471, #1162 N 9TH STREET
2. N/F TREMILLO MARIO VAZQUEZ & VAZQUEZ NORA, DEED BOOK -- PAGE --, INSTRUMENT NO. 2011002903, #1200 N 9TH STREET
3. N/F CITY OF READING, DEED BOOK 156 PAGE 339, INSTRUMENT NO. 5000118218, #1155 N 9TH STREET
4. N/F ARIASRIVAS MARIA L & ESCALANTE JOSE L, DEED BOOK -- PAGE --, INSTRUMENT NO. 2014008077, #1215 N 9TH STREET
5. N/F CARBAJAL HECTOR MONTES & SANCHEZ YOLANDA, DEED BOOK -- PAGE --, INSTRUMENT NO. 2018021483, #1213 N 9TH STREET
6. N/F ABIYE ALEMAYEHU, DEED BOOK 4588 PAGE 487, INSTRUMENT NO. 2005028367, #1217 N 9TH STREET

GRAPHIC SCALE

25 0 25 50 75

SCALE 1" = 25'

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JOHN J. LUCIANI PE-036714-E

7/23/2021

FIRST CAPITAL ENGINEERING
48 South Richland Avenue York, PA 17404 Phone (717) 845-FCAP FAX (717) 852-7891
Gettysburg, PA 17325 Phone (717) 337-3827 www.FCAP.com
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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476-1	1476-1 HOP PLAN	1"=25'

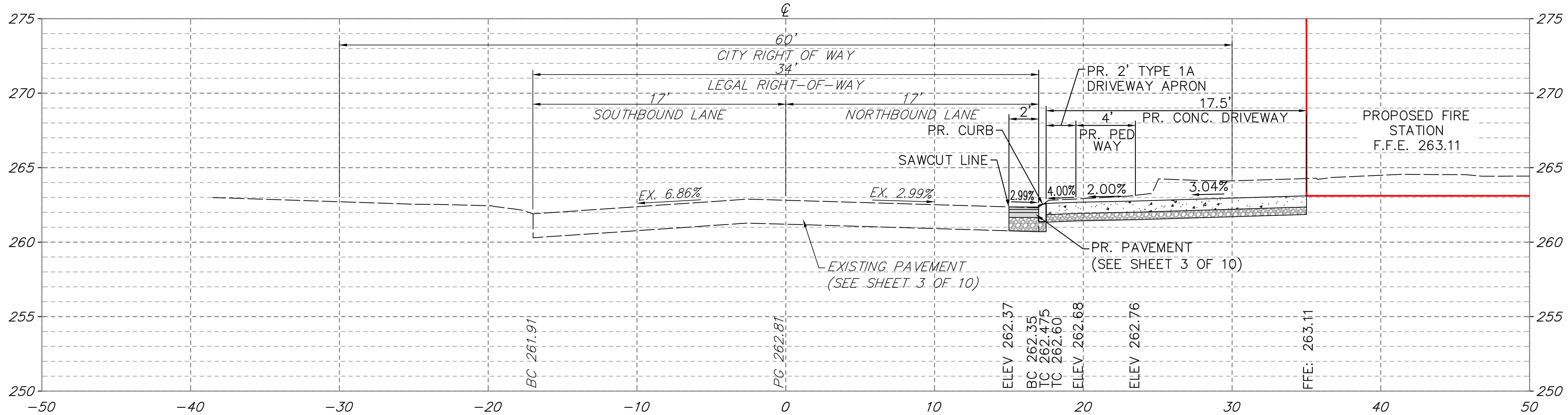
SITE PLAN

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5–0	BERKS	2007	––	7 OF 10

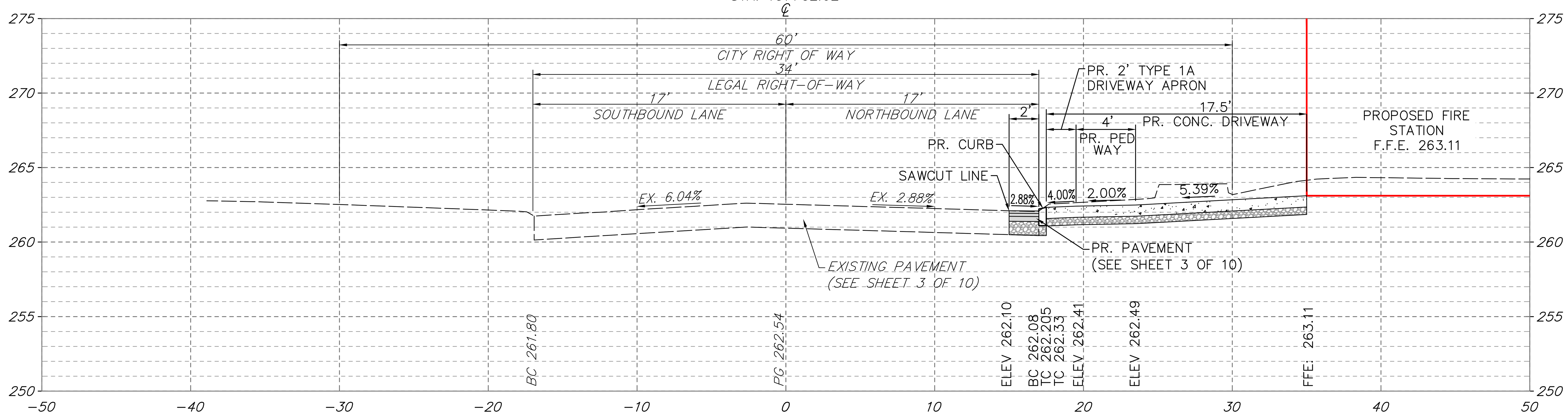
CITY OF READING

No.	DATE	REVISION	BY
1	6/18/21	PER PENNDOT LETTER, CYCLE NO. 2 DATED 6–11–21	ARB
2	7/15/21	PER PENNDOT LETTER, CYCLE NO. 3 DATED 7–15–21	ARB

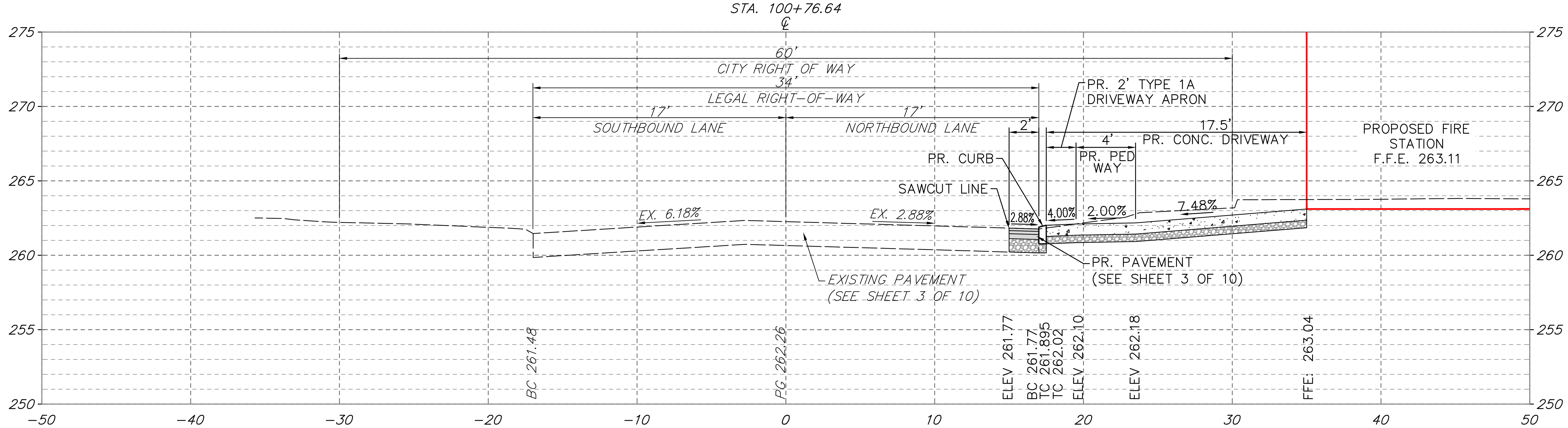
SR 2007
NORTH EDGE OF DRIVEWAY
STA. 101+28.64
℄



SR 2007
MINIMUM USE DRIVEWAY ℄
STA. 101+02.62
℄



SR 2007
SOUTH EDGE OF DRIVEWAY
STA. 100+76.64
℄



VERTICAL SCALE

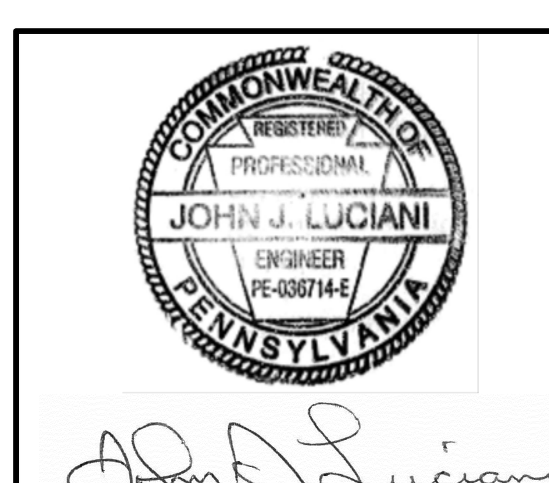
5 0 5 7.5 10

SCALE 1" = 5'

HORIZONTAL SCALE

5 0 5 7.5 10

SCALE 1" = 5'



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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476–1	1476–1 HOP SEC	1" =25'

CROSS SECTION

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	BERKS	2007	--	8 OF 10

CITY OF READING

No.	DATE	REVISION	BY
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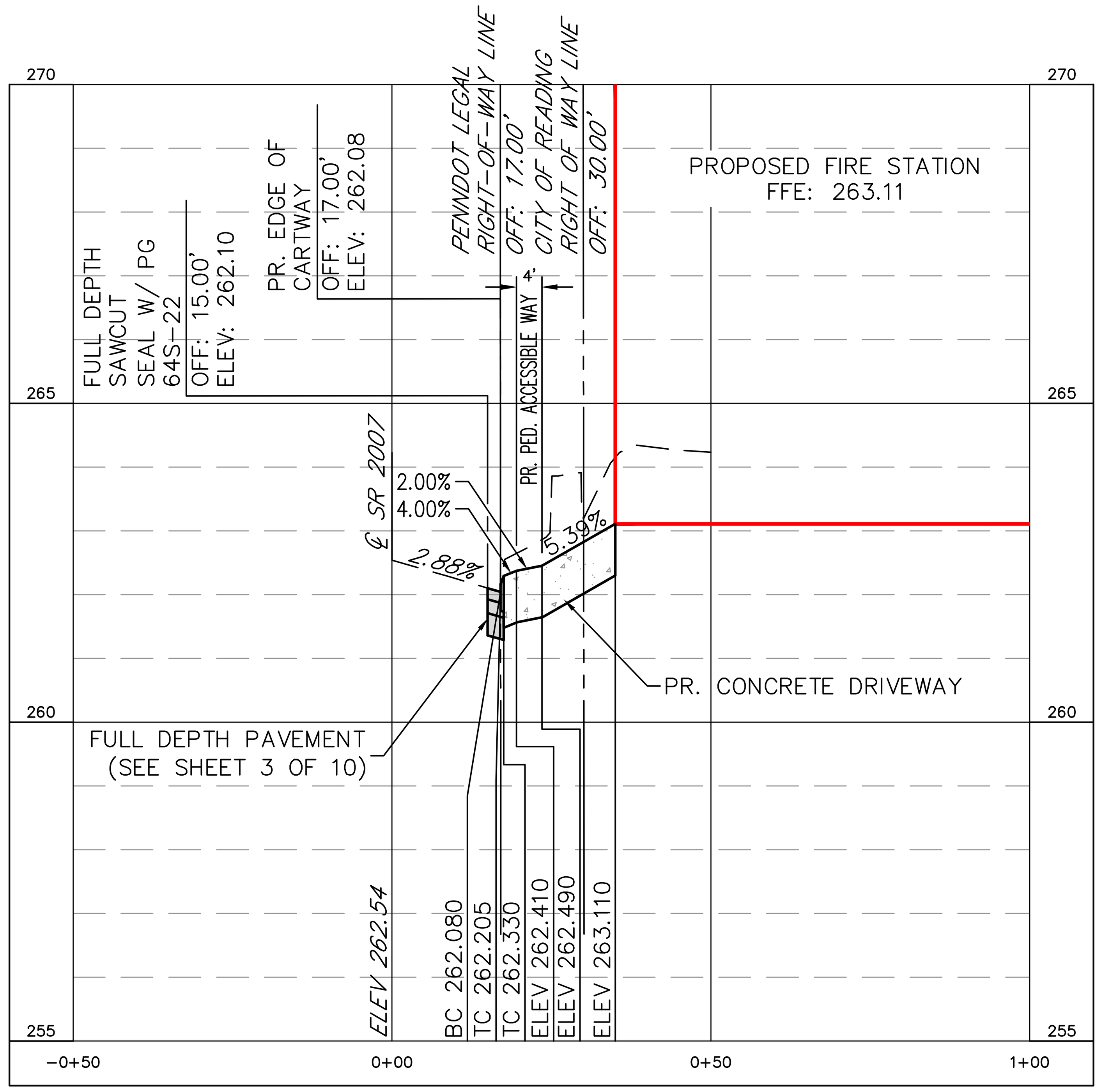
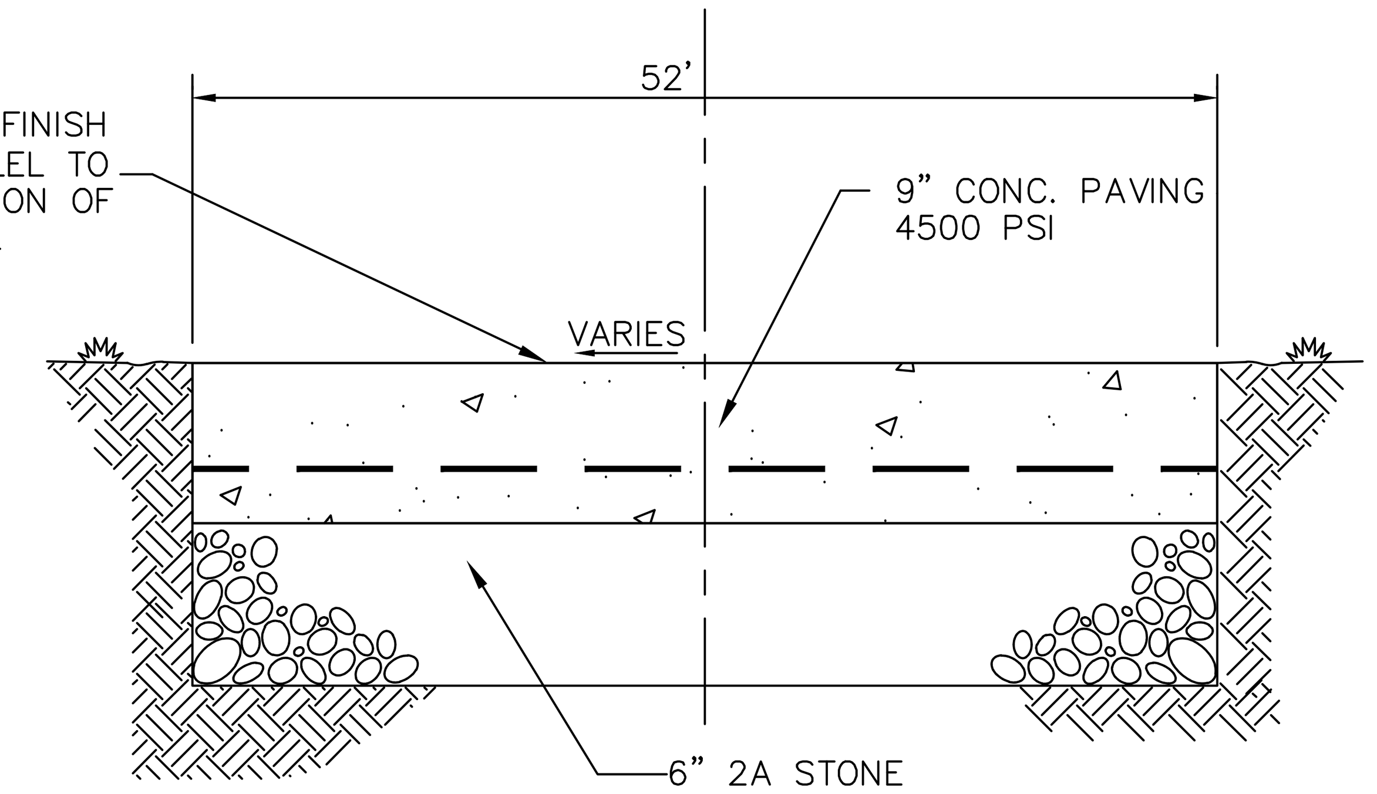


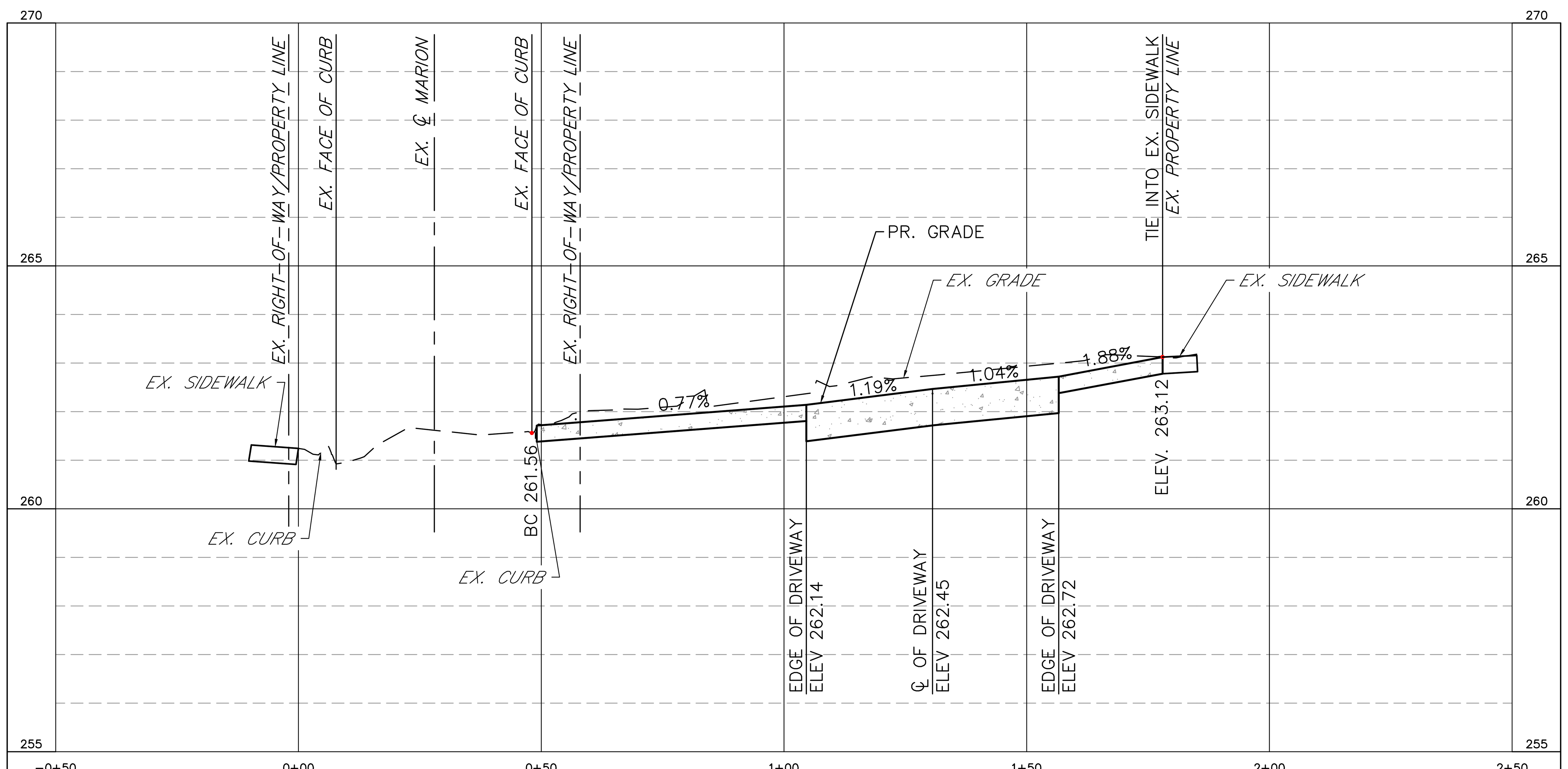
MINIMUM USE DRIVEWAY CL
SCALE: HORZ 1"=20'
VERT 1"=2'



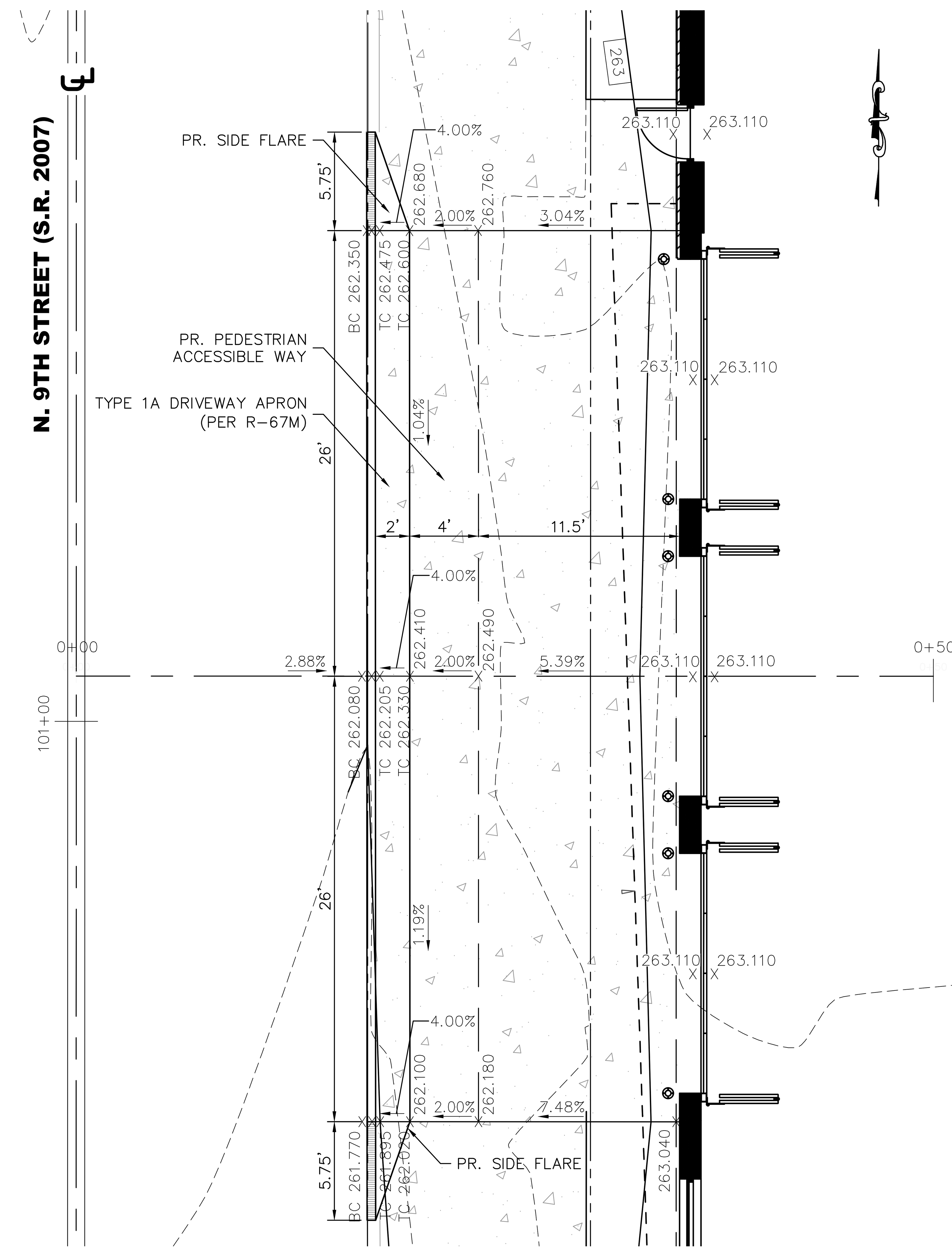
- 9" PORTLAND CEMENT CONCRETE MIX (4500 PSI)
- 6" 2A STONE AGGREGATE
- 18" LONG #8 DOWEL BARS PLACED 12" ON CENTER FOR LOAD TRANSFER, 6" FROM LONGITUDINAL JOINT
- MAXIMUM JOINT SPACING = 15 FEET, NO MID SLAB REINFORCEMENT
- 14" LONG #4 "J" TIE BARS PLACED 36" ON CENTER (GRADE 60, EPOXY COATED STEEL)

CONCRETE DRIVEWAY DETAIL

NOT TO SCALE



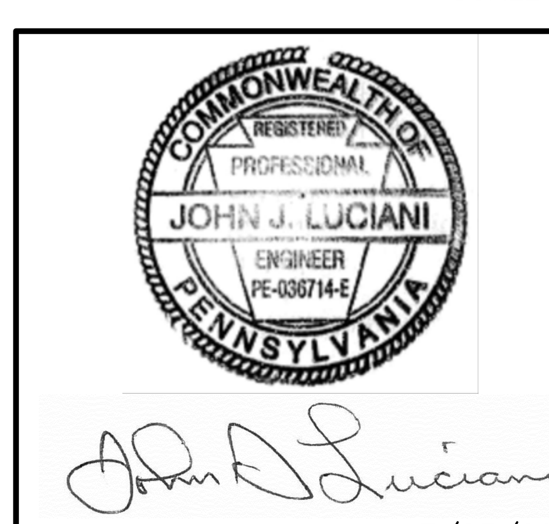
PROPOSED PEDESTRIAN ACCESSIBLE WAY CENTERLINE
SCALE: HORZ 1"=20'
VERT 1"=2'



PLAN VIEW SCALE
(DEPARTMENT IS NOT APPROVING ELEVATIONS)

5 0 5 10 15

SCALE 1" = 5'



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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476-1	1476-1 HOP PRO	NOTED

DRIVEWAY PROFILE & DETAILS

EXISTING RESTRICTED PARKING

EXISTING PARKING LEGEND

Legend symbol	Description
Red hatched	EXISTING RESTRICTED/NO PARKING AREA (5 SPACES)
Cyan hatched	EXISTING PUBLIC PARKING (6 SPACES)
Solid cyan	EXISTING FIRE STATION PARKING (3 SPACES)

* NO PARKING WITHIN 20' FROM A CROSSWALK

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5–0	BERKS	2007	--	9 OF 10

CITY OF READING

No.	DATE	REVISION	BY
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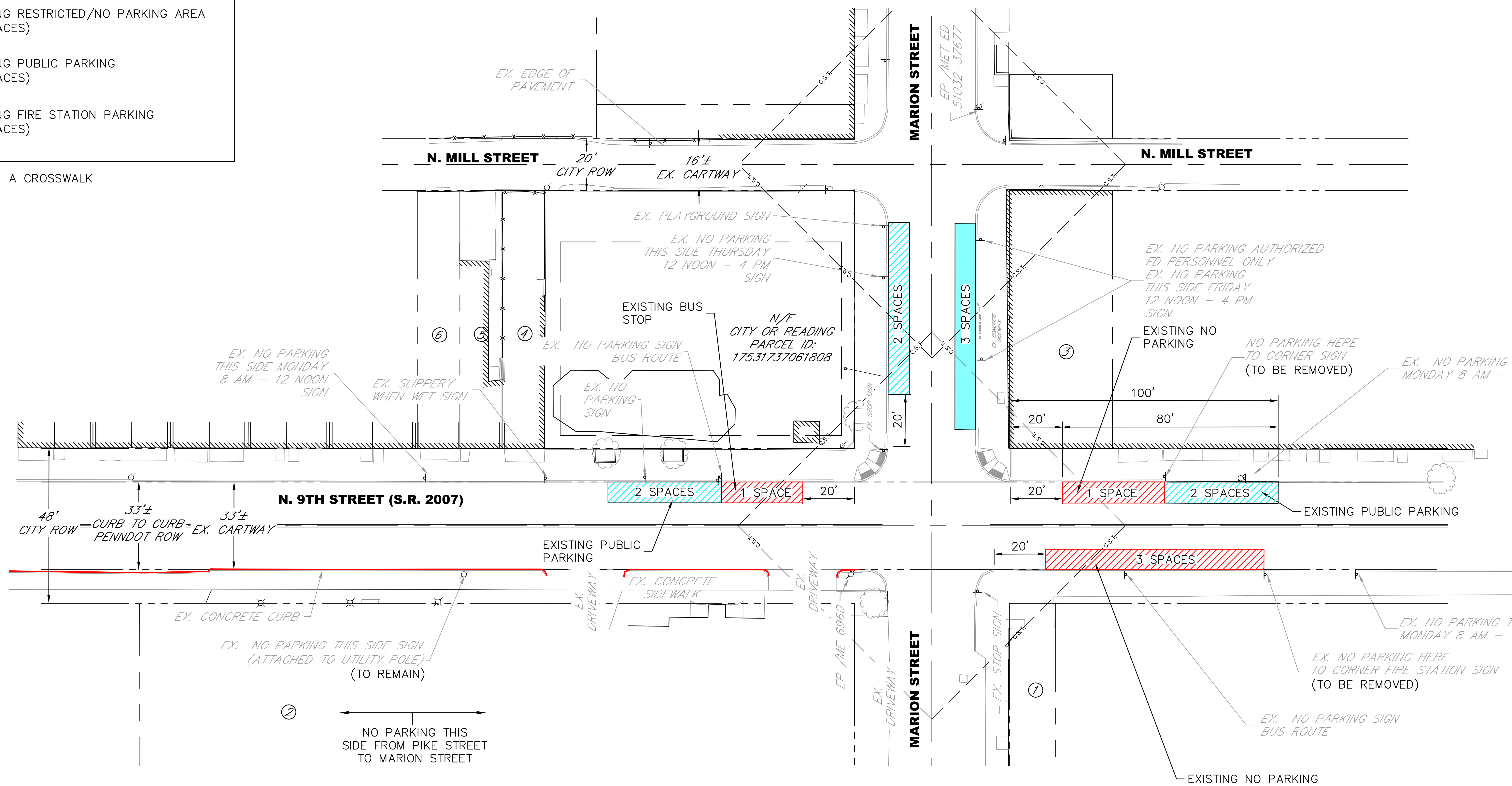

① N/F MARGARITA NUNEZ
DEED BOOK -- PAGE --
INSTRUMENT NO. 2015005471
#1162 N 9TH STREET

② N/F TREMILLO MARIO VAZQUEZ & VAZQUEZ NORA
DEED BOOK -- PAGE --
INSTRUMENT NO. 2011002903
#1200 N 9TH STREET

③ N/F CITY OF READING
DEED BOOK 156 PAGE 339
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⑥ N/F ABIYE ALEMAYEHU
DEED BOOK 4588 PAGE 487
INSTRUMENT NO. 2005028367
#1217 N 9TH STREET

GRAPHIC SCALE

25 0 25 50 75

SCALE 1" = 25'

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7/23/2021

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DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476–1	1476–1 HOP EX PARKING	1" =25'

EXISTING PARKING PLAN

PROPOSED RESTRICTED PARKING

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	BERKS	2007	--	10 OF 10

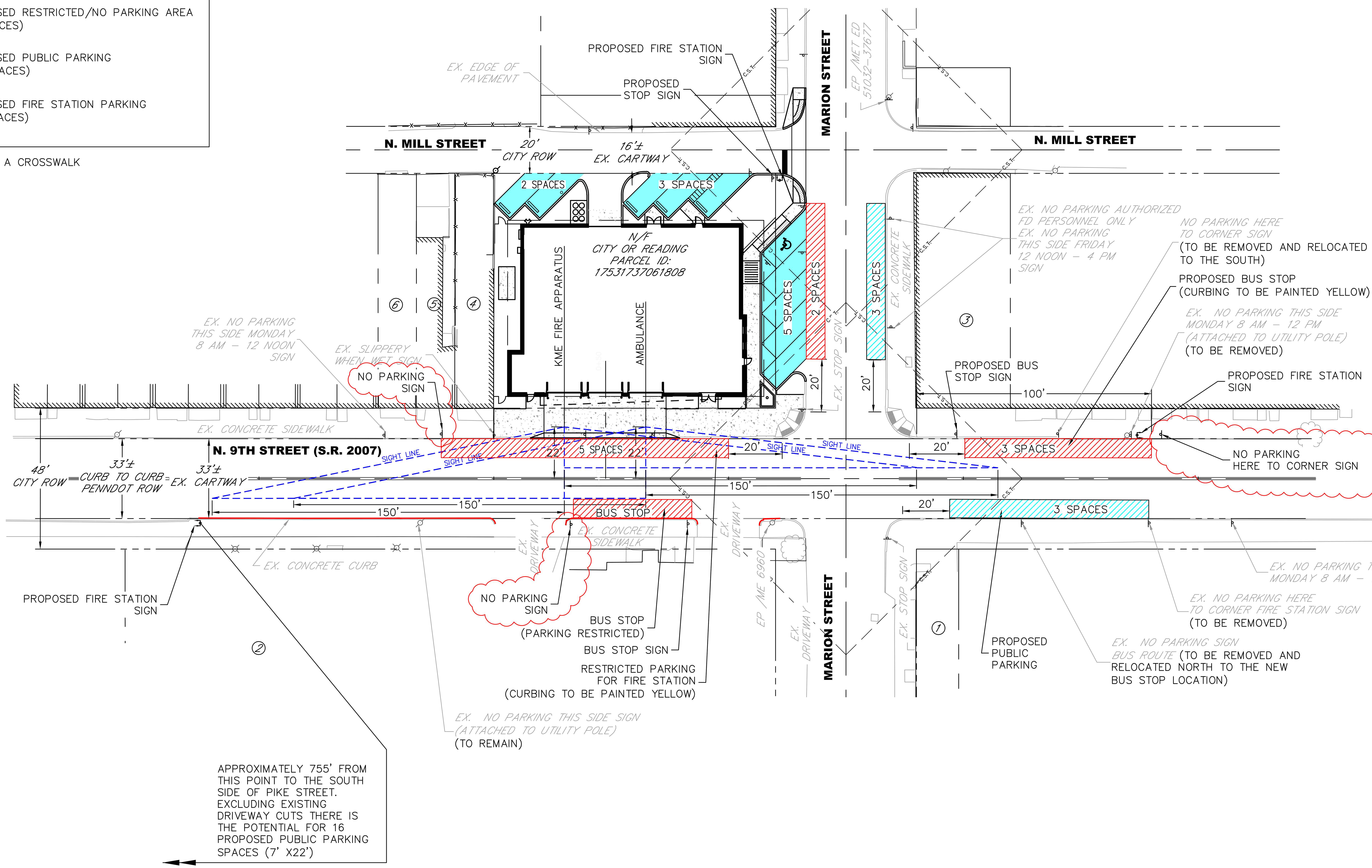
CITY OF READING

No.	DATE	REVISION	BY
1	6/18/21	PER PENNDOT LETTER, CYCLE NO. 2 DATED 6-11-21	ARB
2	~~7/15/21~~	~~PER PENNDOT LETTER, CYCLE NO. 3 DATED 7-15-21~~	~~ARB~~
3	8/19/21	PER PENNDOT LETTER, CYCLE NO. 4 DATED 8-13-21	ARB

PROPOSED PARKING LEGEND

- PROPOSED RESTRICTED/NO PARKING AREA (9 SPACES)
- PROPOSED PUBLIC PARKING (23 SPACES)
- PROPOSED FIRE STATION PARKING (10 SPACES)

* NO PARKING WITHIN 20' FROM A CROSSWALK



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GRAPHIC SCALE

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SCALE 1" = 25'

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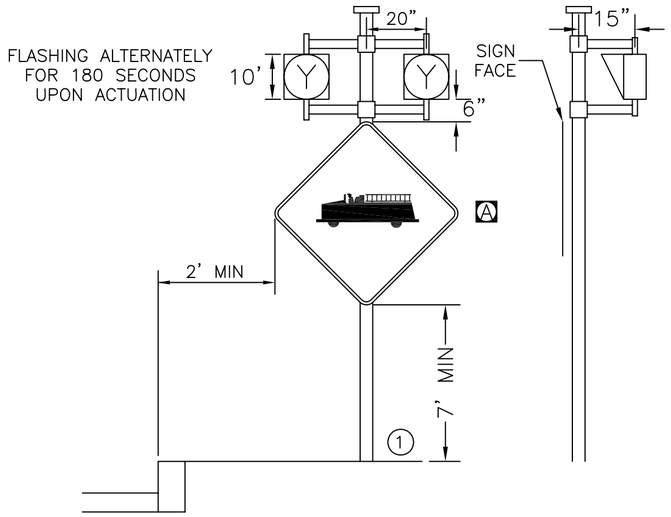
DRAWN BY:	DATE:	JOB No.:	CADD FILE No.	SCALE:
ARB	5/14/2021	1476-1	1476-1 HOP PR PARKING	1" =25'

PROPOSED PARKING PLAN

PERMIT NO.	SHEET 2 of 2
DATE ISSUED	DATE REVISED



1. PLATE BASE OR CAST BASE CONSTRUCTION REFER TO TRAFFIC STANDARDS TC-8800 SERIES.
2. SIGNALS SHALL BE SOLAR POWERED.
3. SIGNALS SHALL BE ACTIVATED BY PUSHBUTTON IN MARION STREET FIRE STATION.
4. WIRELESS RADIO COMMUNICATIONS SHALL BE PROVIDED BETWEEN MARION STREET FIRE STATION AND THE SIGNALS.

GENERAL NOTES

THESE DEVICES SHALL BE INSTALLED IN ACCRODANCE WITH THE PA DEPT OF TRANSPORTATION PUBLICATION 408 SPECIFICATIONS, PUBLICATION 149, AND THE 8700 AND 8800 SERIES STANDARD DRAWING.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 287-1974 AS AMENDED, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

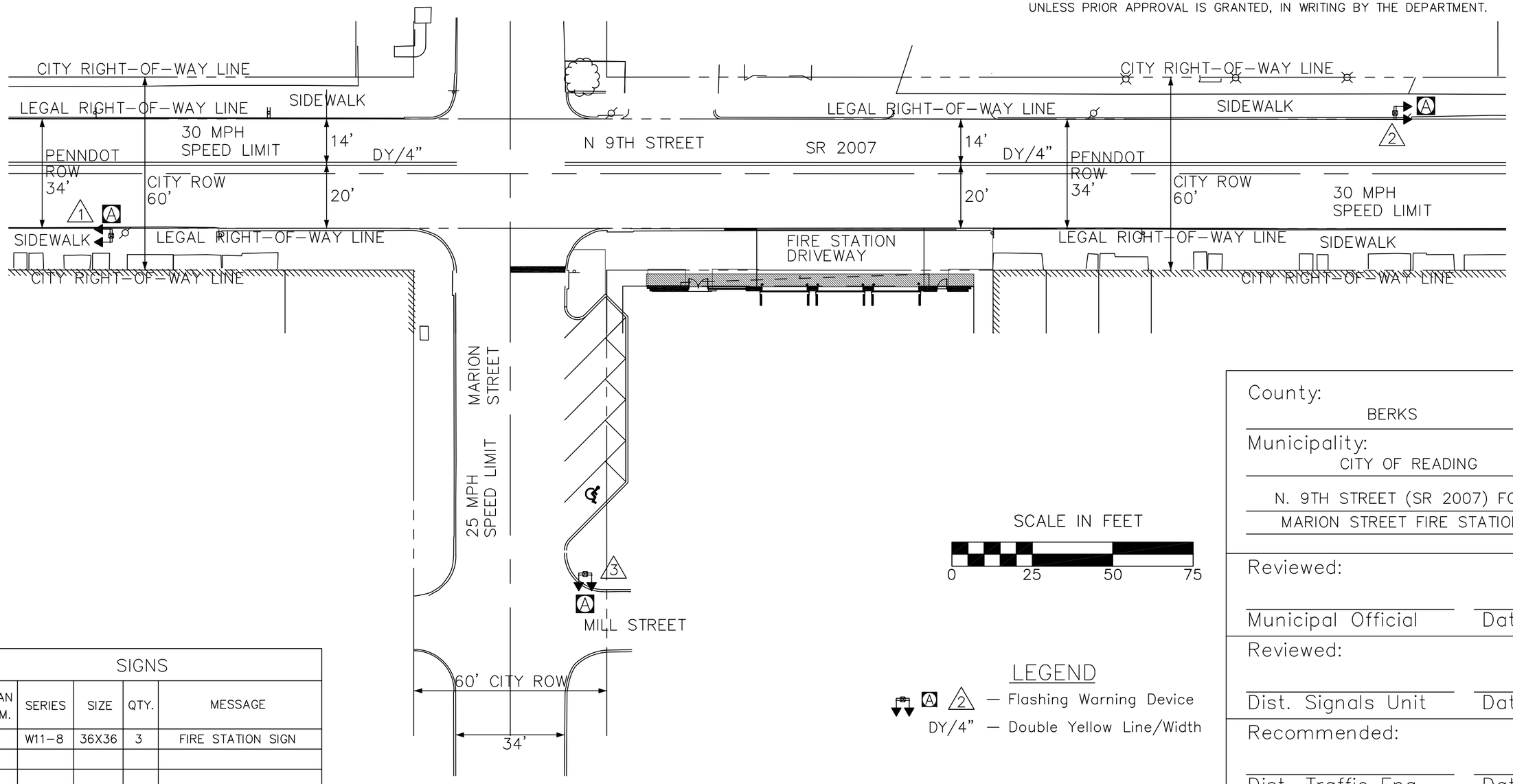
THE FLASHING WARNING DEVICES MAY BE CONTROLLED BY A TIME CLOCK AND/OR BY ACTUATION AS INDICATED.

FOR ADDITIONAL INFORMATION CONCERNING ANY PAVEMENT MARKINGS REFER TO PENNDOT TC-8600 SERIES STANDARDS.

TRIMMING TREES, NECESSARY FOR PROPER VISIBILITY OF THE FLASHING WARNING DEVICES IS THE RESPONSIBILITY OF THE MUNICIPALITY.

IN ADDITION TO THIS PERMIT, THE PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY OPENINGS BEING MADE IN OR UNDER ANY PORTION OF A STATE HIGHWAY, IF APPLICABLE.

NO CHANGES OR MODIFICATIONS TO THESE DEVICES ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING BY THE DEPARTMENT.



SCALE IN FEET

0 25 50 75

LEGEND

A 2 — Flashing Warning Device

DY/4" — Double Yellow Line/Width

SIGNS				
PLAN SYM.	SERIES	SIZE	QTY.	MESSAGE
A	W11-8	36X36	3	FIRE STATION SIGN

County: BERKS

Municipality: CITY OF READING

N. 9TH STREET (SR 2007) FOR MARION STREET FIRE STATION

Reviewed:

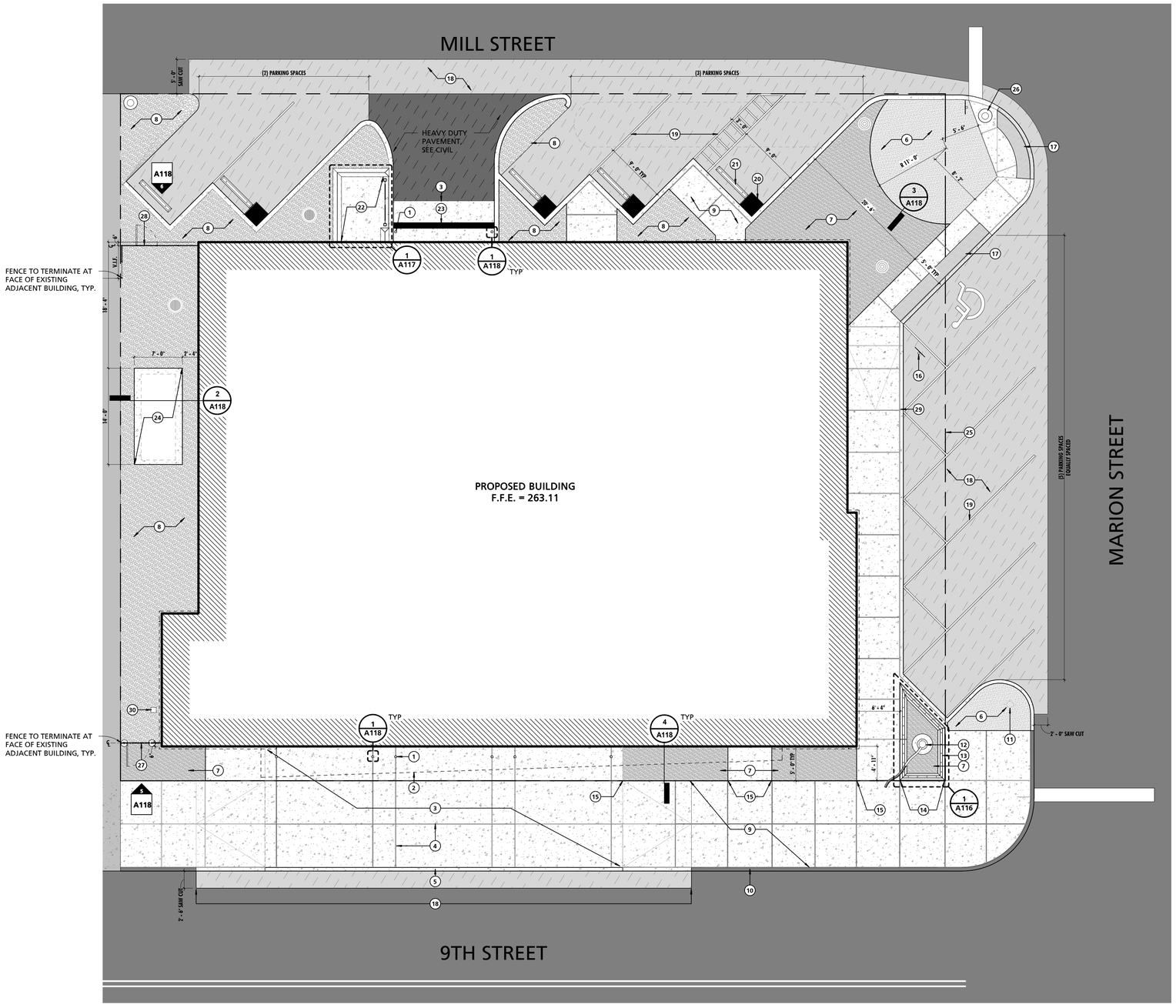
Municipal Official Date

Reviewed:

Dist. Signals Unit Date

Recommended:

Dist. Traffic Eng. Date



1 ARCHITECTURAL SITE DIAGRAM

1/8" = 1'-0"

GENERAL SITE NOTES

NOTE #	NOTE
1	SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
2	SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.
3	ALL EDGES OF NEW PAVING SHALL MEET EXISTING PAVEMENT IN LINE AND GRADE.
4	CONTRACTOR TO SAW CUT AREAS OF PARKING LOT TO RECEIVE EXCAVATION/TRENCHING. AFTER APPLICABLE WORK HAS BEEN PREFORMED WITHIN AREA OF EXCAVATION/TRENCH BACKFILL AREA W/ COMPACTED SUITABLE SOIL. PROVIDE ASPHALT PAVING BASE COURSE AS INDICATED WITHIN CIVIL DRAWINGS.
5	ASPHALT TOP COURSE SHALL BE LAID ONLY AFTER ALL MILLING, TRENCHING, HEAVY CONSTRUCTION & EXCAVATION PROCEDURES HAVE BEEN COMPLETED. PATCHES WITHIN NEW TOP COURSE WILL NOT BE ACCEPTED. TOP COURSE DESIGN SHALL MATCH THAT OF PROVIDED PAVING SECTIONS WITHIN CIVIL DRAWINGS. EDGES OF NEW ASPHALT THAT ABUT EXISTING SITE WORK SHALL SHARE A UNIFORM GRADE ELEVATION.

0 TYPICAL REFERENCED NOTES - SITE PLAN

NO.	NOTE
1	BOLLARD
2	LINE OF CANOPY ABOVE.
3	CONCRETE APRON.
4	CONTROL JOINT.
5	MOUNTABLE CONCRETE CURB.
6	LANDSCAPE MULCH BED.
7	2A TYPE PEA GRAVEL.
8	1"-3" RIVER ROCK GRAVEL.
9	NEW CONCRETE SIDEWALK.
10	EXISTING CURB TO REMAIN.
11	EXISTING FIRE HYDRANT TO REMAIN.
12	30' FLAG POLE WITH 4'X6' U.S. FLAG.
13	WOOD TOP CONCRETE BENCH/PLANTER BASIN.
14	ALIGN EDGE OF CONTROL JOINT TO OUTSIDE FACE OF PLANTER BASIN WALL.
15	ALIGN EDGE OF CONTROL JOINT TO OUTSIDE FACE OF LANDSCAPE BED.
16	ADA PARKING SIGNAGE.
17	DETACTABLE WARNING STRIP & DEPRESSED CURB. SEE CIVIL.
18	NEW BITUMINIOUS PAVEMENT.
19	PARKING LOT STRIPING.
20	METAL GRATE, CATCH BASIN.
21	CONCRETE WHEELSTOP.
22	GARBAGE ENCLOSURE & CONCRETE PAD.
23	HEAVY DUTY METAL TRENCH DRAIN.
24	CONCRETE GENERATOR PAD. SHOWN FOR REFERENCE. PART OF ELECTRICAL PRIME SCOPE. ELECTRICAL PRIME TO COORDINATE FINAL PAD SIZE, LOCATION, AND CONDUIT PROVISONS WITH GENERATOR SHOP DRAWINGS PRIOR TO PAD POUR.
25	PROPERTY LINE.
26	UTILITY POLE.
27	POWDER COATED STEEL GATE.
28	CHAIN-LINK FENCE WITH PRIVACY SLATS
29	NEW CONCRETE CURB.
30	GAS METER BY UTILITY COMPANY

MW STUDIOS
ARCHITECTURE + MASTER PLANNING
10839-D PHILADELPHIA RD
WHITE MARSH, MD 21162
(P) 410-344-1460
(F) 443-403-2460
(E) INFO@MWSARCH.COM
WWW.MWSARCH.COM

SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

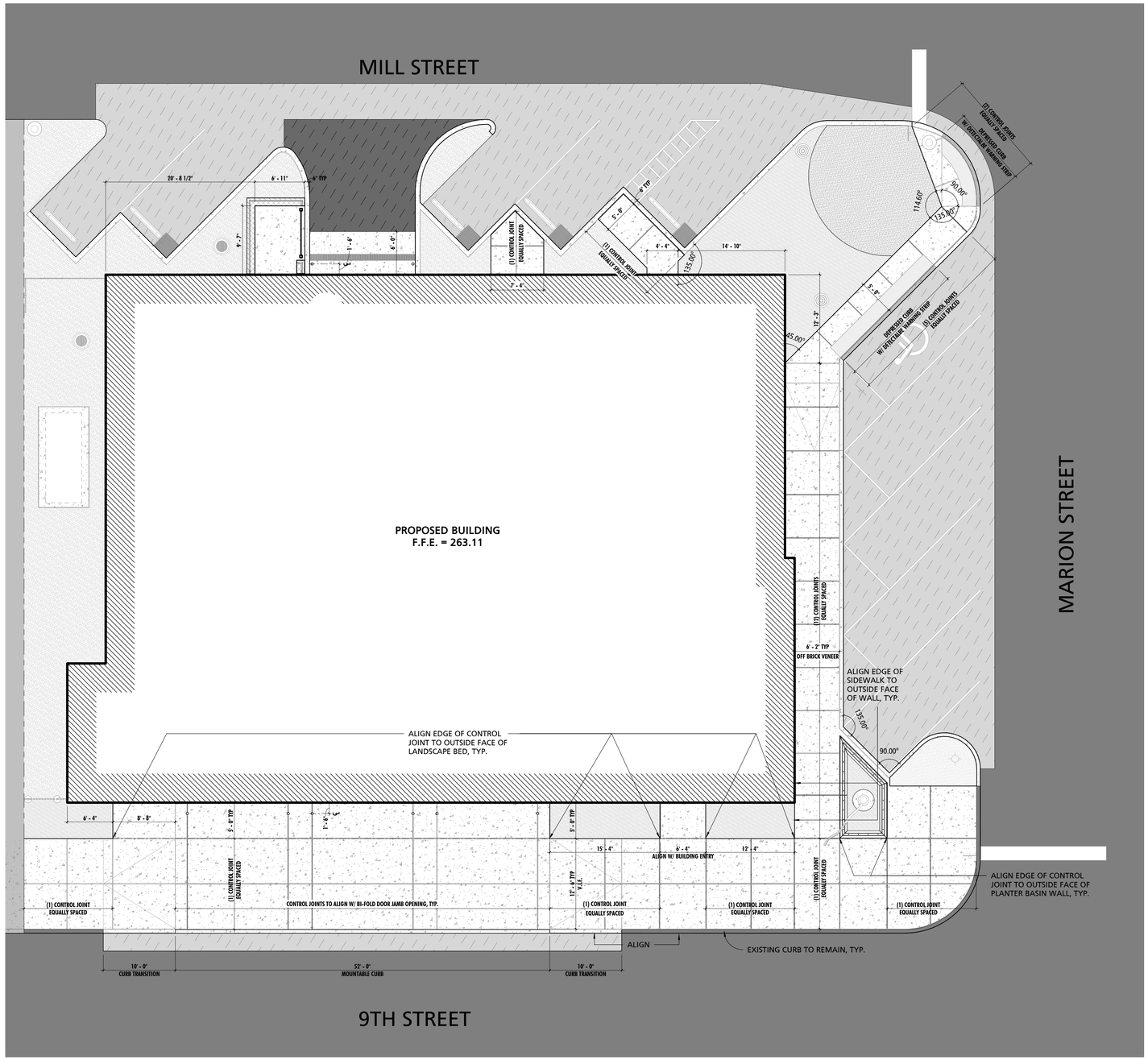
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ARCHITECTURAL SITE DIAGRAM
SHEET NUMBER: A100

7/20/2021 11:39:39 AM



GENERAL SITE NOTES

NOTE #	NOTE
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2	SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.
3	ALL EDGES OF NEW PAVING SHALL MEET EXISTING PAVEMENT IN LINE AND GRADE.
4	CONTRACTOR TO SAW CUT AREAS OF PARKING LOT TO RECEIVE EXCAVATION/TRENCHING. AFTER APPLICABLE WORK HAS BEEN PREFORMED WITHIN AREA OF EXCAVATION/TRENCH BACKFILL AREA W/ COMPACTED SUITABLE SOIL. PROVIDE ASPHALT PAVING BASE COURSE AS INDICATED WITHIN CIVIL DRAWINGS.
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1 **SITE SLAB & SIDEWALK DIAGRAM**
1/8" = 1'-0"

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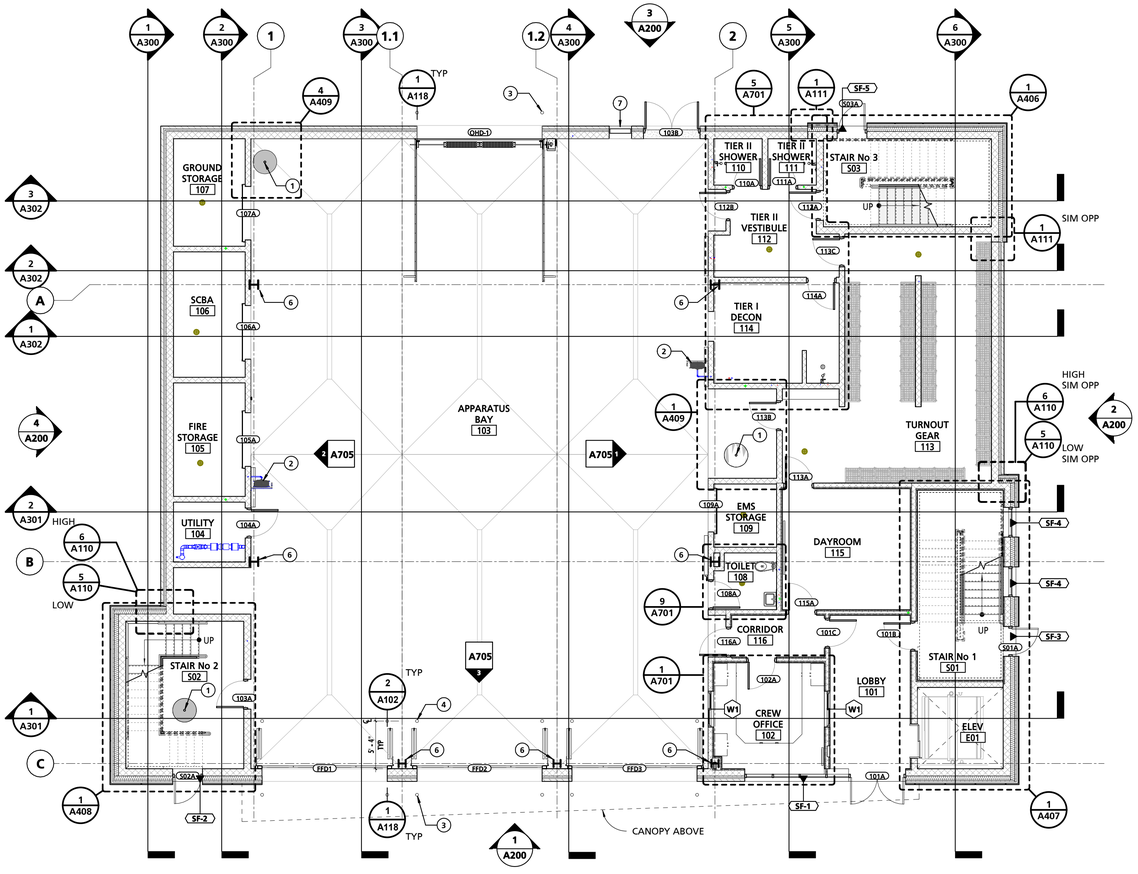
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SITE SLAB & SIDEWALK DIAGRAM
SHEET NUMBER: A101

7/20/2021 11:39:52 AM



1 REFERENCE PLAN - FIRST FLOOR

1/8" = 1'-0"

GENERAL REFERENCE PLAN NOTES

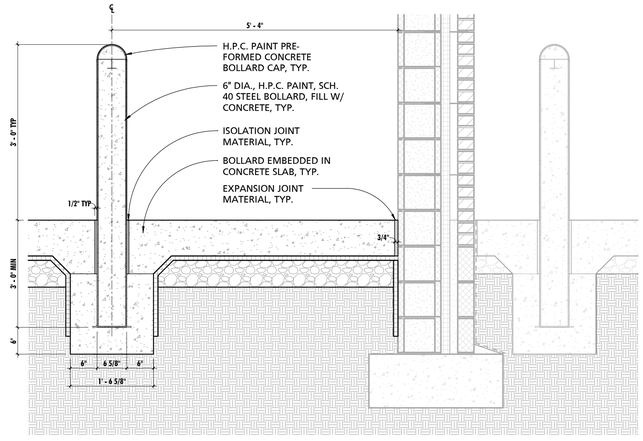
NOTE #	NOTE
1	FURNITURE SHOWN ON ANY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY U.N.O.
2	FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS SHALL BE PROVIDED IN LOCATIONS AS INDICATED WITHIN THE CODE PLAN AND DESCRIBE WITHIN THE PROJECT MANUAL.
3	SEE A500 SERIES FOR ROOF PLAN DETAILS AND NOTES.
4	SEE A600 SERIES FOR DOOR, WINDOW & STOREFRONT SCHEDULE AND NOTES.
5	SEE A800 SERIES FOR REFLECTED CEILING PLAN DETAILS AND NOTES.
6	AT ALL COUNTERTOPS PROVIDE ONE GROMMET PER 3 LINEAR FEET OF COUNTERTOP. COORDINATE ALL LOCATIONS W/ ARCHITECT PRIOR TO FABRICATION.
7	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1. ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.

0 TYPICAL REFERENCED NOTES - NEW CONSTRUCTION

NO.	NOTE
1	FIRE POLE.
2	HOSE REEL.
3	EXTERIOR BOLLARD.
4	INTERIOR BOLLARD.
5	CENTERLINE OF HOIST BEAM ABOVE, FOR CRANE.
6	INTUMESCENT COATING APPLIED TO STEEL COLUMNS SUPPORTING CMD-5 DECK ABOVE.
7	MECHANICAL LOUVER. SEE EMP DWGS.
8	HINGED GALVANIZED TUBE STEEL GATE.
9	CANOPY ROOF BELOW.

PLAN LEGEND

NEW WALL/PARTITION



2 TYPICAL INTERIOR BOLLARD DETAIL

3/4" = 1'-0"

MW STUDIOS
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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

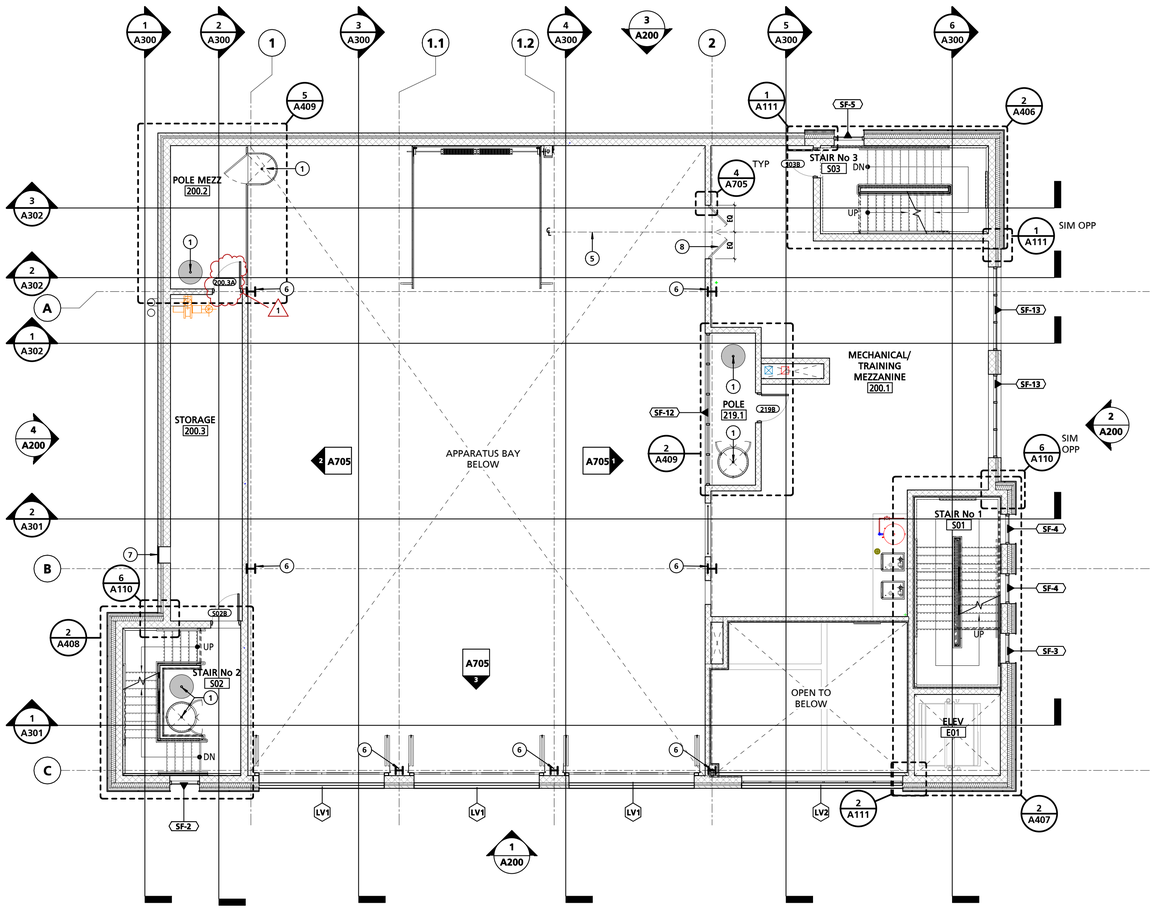
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: REFERENCE PLAN - FIRST FLOOR
SHEET NUMBER: A102

7/20/2021 11:40:10 AM



1 REFRENCE PLAN - MEZZANINE

1/8" = 1'-0"

GENERAL REFERENCE PLAN NOTES

NOTE #	NOTE
1	FURNITURE SHOWN ON ANY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY U.N.O.
2	FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS SHALL BE PROVIDED IN LOCATIONS AS INDICATED WITHIN THE CODE PLAN AND DESCRIBE WITHIN THE PROJECT MANUAL.
3	SEE A500 SERIES FOR ROOF PLAN DETAILS AND NOTES.
4	SEE A600 SERIES FOR DOOR, WINDOW & STOREFRONT SCHEDULE AND NOTES.
5	SEE A800 SERIES FOR REFLECTED CEILING PLAN DETAILS AND NOTES.
6	AT ALL COUNTERTOPS PROVIDE ONE GROMMET PER 3 LINEAR FEET OF COUNTERTOP. COORDINATE ALL LOCATIONS W/ ARCHITECT PRIOR TO FABRICATION.
7	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1. ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.

0 TYPICAL REFERENCED NOTES - NEW CONSTRUCTION

NO.	NOTE
1	FIRE POLE.
2	HOSE REEL.
3	EXTERIOR BOLLARD.
4	INTERIOR BOLLARD.
5	CENTERLINE OF HOIST BEAM ABOVE, FOR CRANE.
6	INTUMESCENT COATING APPLIED TO STEEL COLUMNS SUPPORTING CMD-5 DECK ABOVE.
7	MECHANICAL LOUVER. SEE EMP DWGS.
8	HINGED GALVANIZED TUBE STEEL GATE.
9	CANOPY ROOF BELOW.

PLAN LEGEND

NEW WALL/PARTITION

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CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: REFERENCE PLAN - MEZZANINE
SHEET NUMBER: A103

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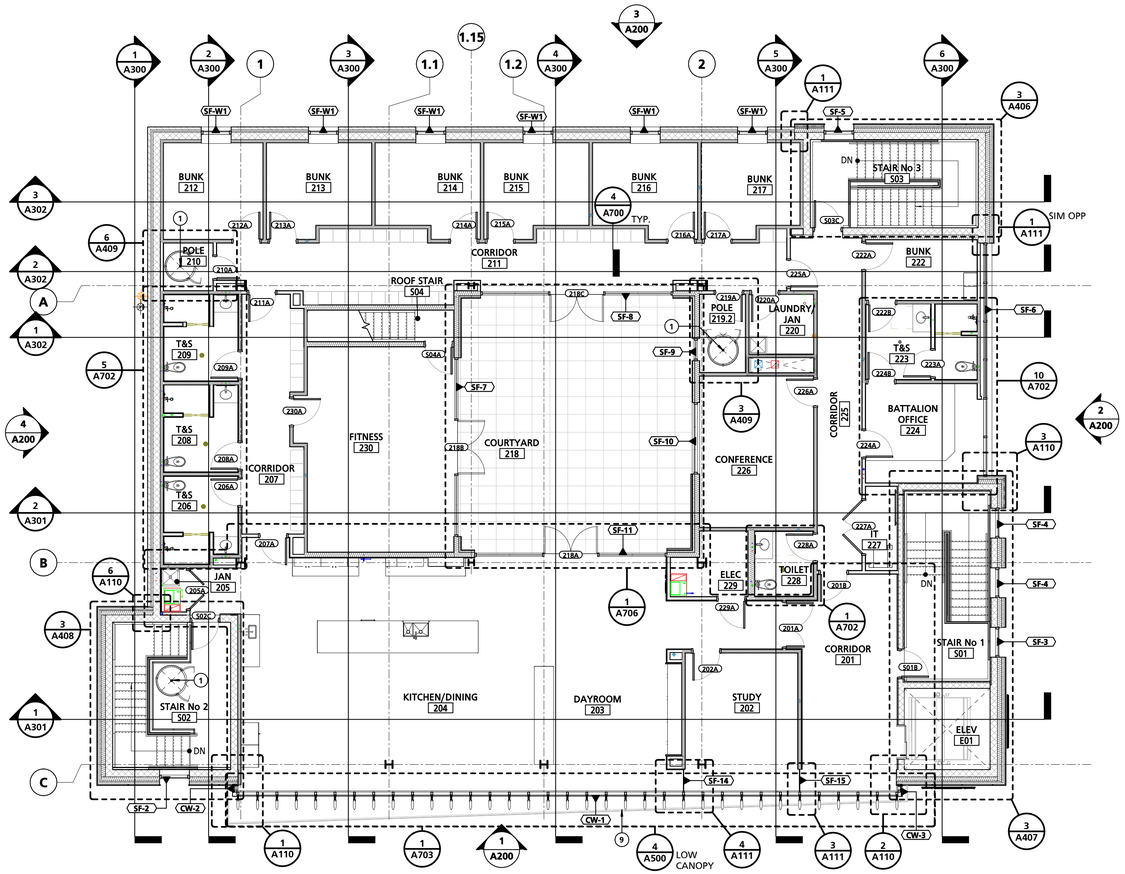

1 REFERENCE PLAN - SECOND FLOOR

1/8" = 1'-0"

GENERAL REFERENCE PLAN NOTES

NOTE #	NOTE
1	FURNITURE SHOWN ON ANY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY U.N.O.
2	FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS SHALL BE PROVIDED IN LOCATIONS AS INDICATED WITHIN THE CODE PLAN AND DESCRIBE WITHIN THE PROJECT MANUAL.
3	SEE A500 SERIES FOR ROOF PLAN DETAILS AND NOTES.
4	SEE A600 SERIES FOR DOOR, WINDOW & STOREFRONT SCHEDULE AND NOTES.
5	SEE A800 SERIES FOR REFLECTED CEILING PLAN DETAILS AND NOTES.
6	AT ALL COUNTERTOPS PROVIDE ONE GROMMET PER 3 LINEAR FEET OF COUNTERTOP. COORDINATE ALL LOCATIONS W/ ARCHITECT PRIOR TO FABRICATION.
7	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1: ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.

0 TYPICAL REFERENCED NOTES - NEW CONSTRUCTION

NO.	NOTE
1	FIRE POLE.
2	HOSE REEL.
3	EXTERIOR BOLLARD.
4	INTERIOR BOLLARD.
5	CENTERLINE OF HOIST BEAM ABOVE, FOR CRANE.
6	INTUMESCENT COATING APPLIED TO STEEL COLUMNS SUPPORTING CMD-5 DECK ABOVE.
7	MECHANICAL LOUVER. SEE EMP DWGS.
8	HINGED GALVANIZED TUBE STEEL GATE.
9	CANOPY ROOF BELOW.

PLAN LEGEND

NEW WALL/PARTITION

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EXPIRATION DATE: 6-30-2023

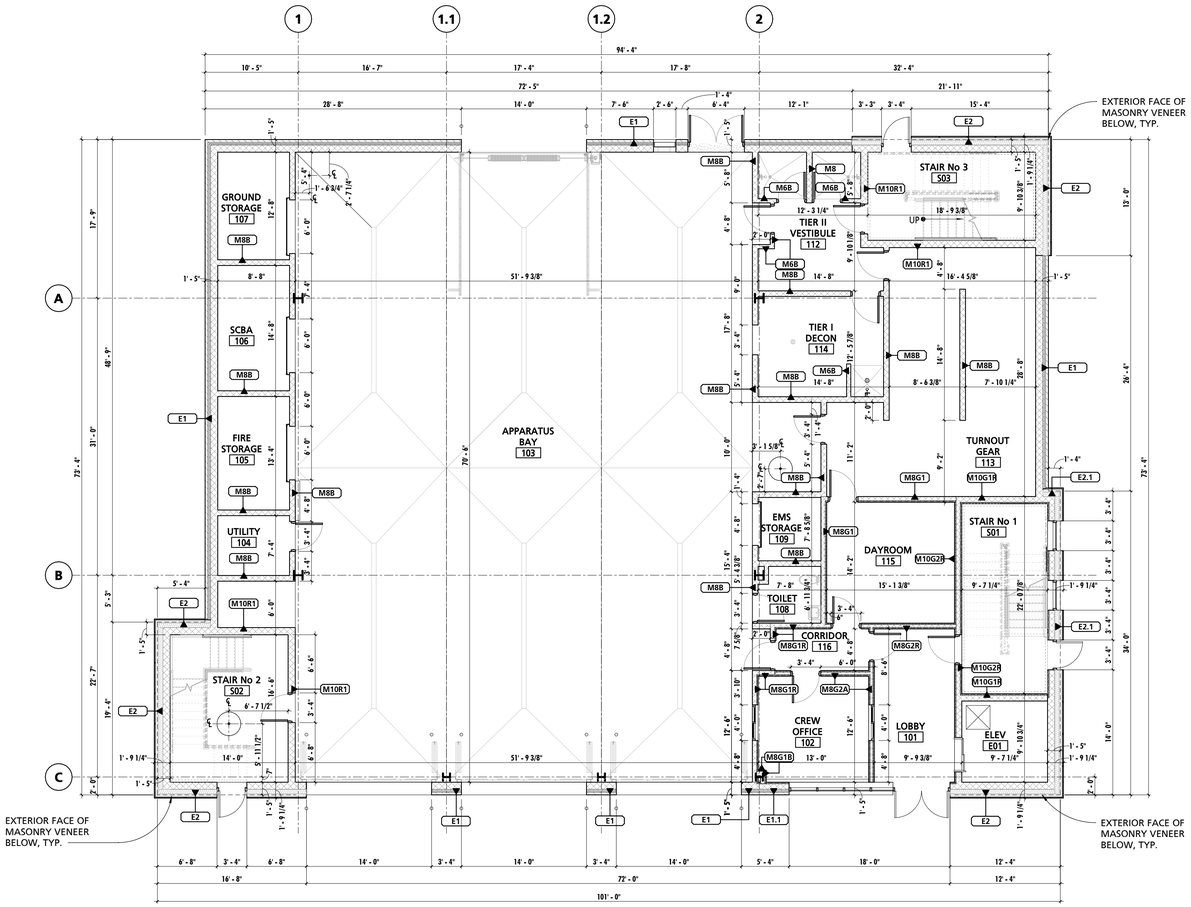
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: REFERENCE PLAN - SECOND FLOOR
SHEET NUMBER: A104

7/20/2021 11:40:23 AM



1 DIMENSION PLAN - FIRST FLOOR

1/8" = 1'-0"

GENERAL DIMENSION PLAN NOTES

NOTE #	NOTE
1	G.C. SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK.
2	EXTERIOR DIMENSIONS AT WALL TYPE E2 ARE TAKEN FROM EXTERIOR FACE OF WALL TYPE E1 BRICK VENEER.
3	SEE ENLARGED PLANS FOR ROOMS 110, 111, 114 SLAB DETAILS.
4	SEE A700 SERIES FOR FUTHER DIMENSIONING ON ENLARGED PLANS.
5	FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS SHALL BE PROVIDED IN LOCATIONS AS INDICATED WITHIN THE CODE PLAN AND DESCRIBE WITHIN THE PROJECT MANUAL.
6	SEE A500 SERIES FOR ROOF PLAN DETAILS AND NOTES.
7	SEE A600 SERIES FOR DOOR, WINDOW & STOREFRONT SCHEDULE AND NOTES.
8	SEE A800 SERIES FOR REFLECTED CEILING PLAN DETAILS AND NOTES.
9	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 303, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1 ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDDED WITHIN CMU WALLS & TERMINATE TO RECESSED WALL BOXES OR THEIR ASSOCIATED FIXTURES.

PLAN LEGEND

NEW WALL/PARTITION

MW STUDIOS
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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: DIMENSION PLAN - FIRST FLOOR
SHEET NUMBER: A105

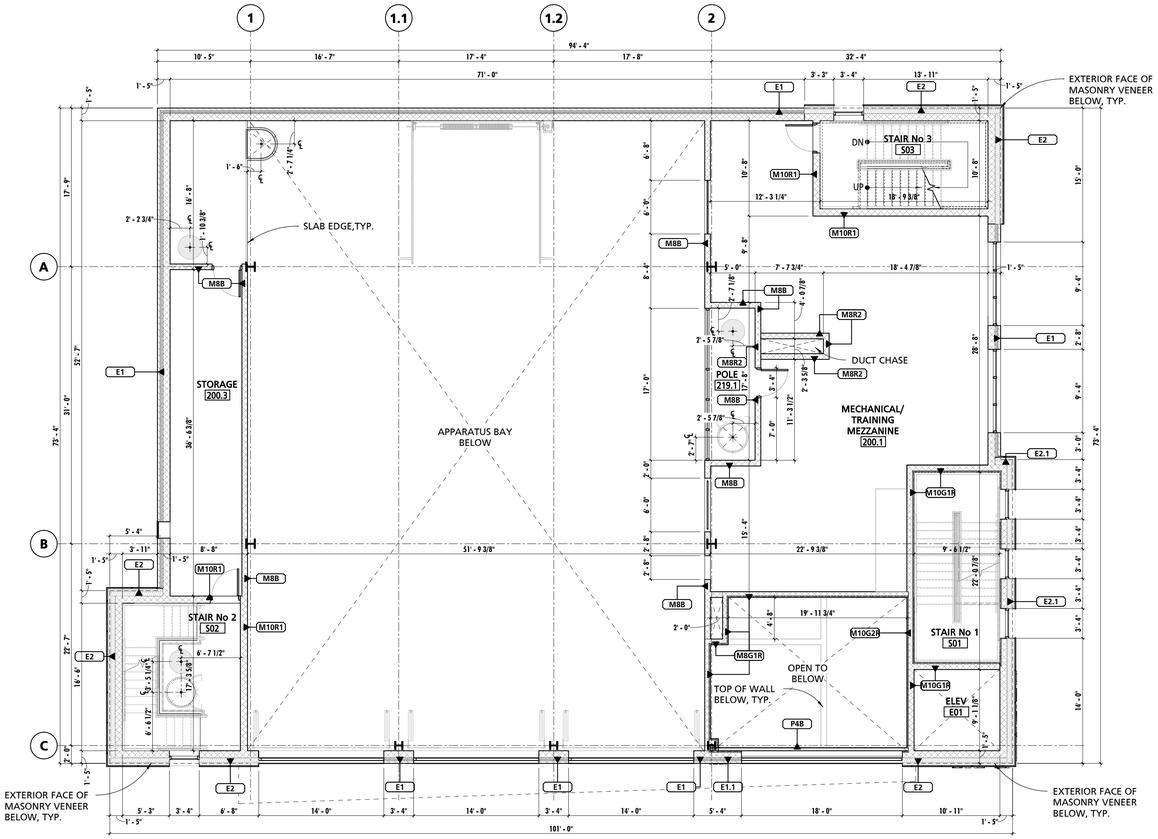
7/20/2021 11:40:30 AM

PLAN LEGEND

NEW WALL/PARTITION

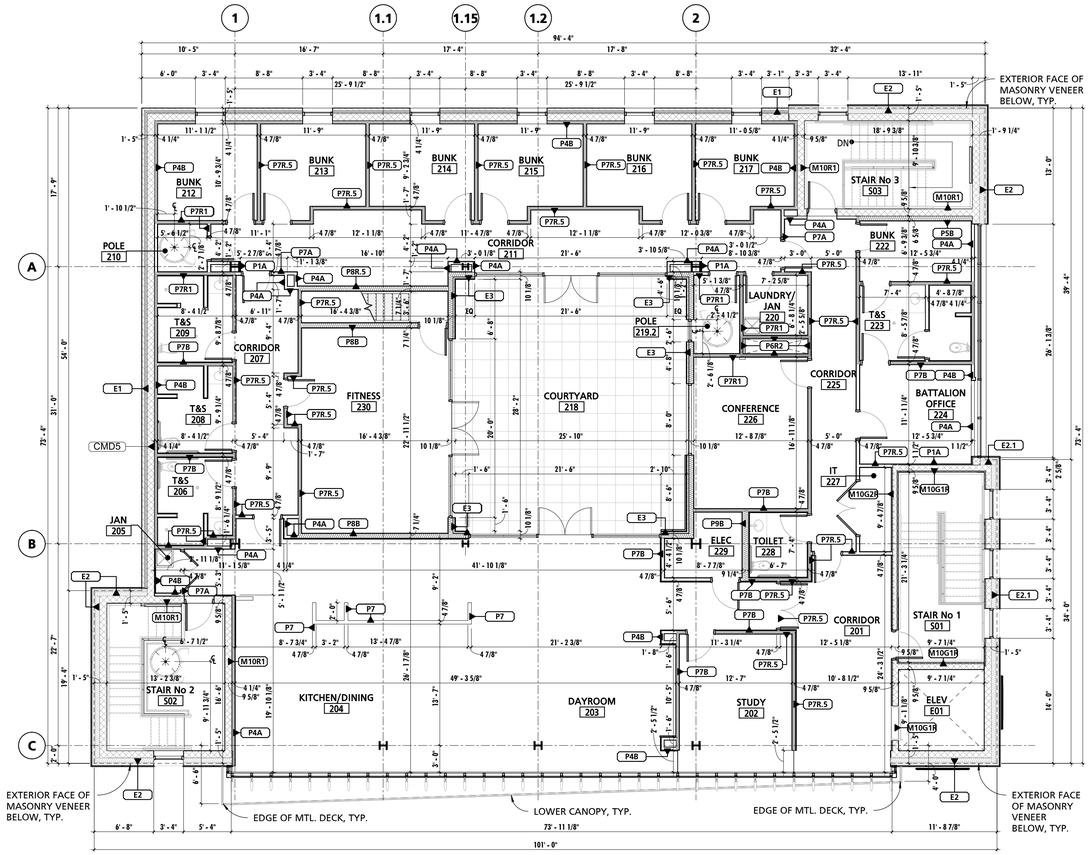
GENERAL DIMENSION PLAN NOTES

NOTE #	NOTE
1	G.C. SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK.
2	ALL DOOR JAMBS IN METAL STUD WALL SHALL BE A MINIMUM OF 4" FROM ADJACENT / PERPENDICULAR WALLS UNLESS NOTED OTHERWISE.
3	EXTERIOR DIMENSIONS AT WALL TYPE E2 ARE TAKEN FROM EXTERIOR FACE OF CMU VENEER BELOW.
4	SEE ENLARGED PLANS FOR ROOMS 110, 111, 114 SLAB DETAILS.
5	SEE A700 SERIES FOR FUTHER DIMENSIONING ON ENLARGED PLANS.
6	FURNITURE SHOWN ON ANY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY U.N.O.
7	FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS SHALL BE PROVIDED IN LOCATIONS AS INDICATED WITHIN THE CODE PLAN AND DESCRIBE WITHIN THE PROJECT MANUAL.
8	SEE A500 SERIES FOR ROOF PLAN DETAILS AND NOTES.
9	SEE A800 SERIES FOR REFLECTED CEILING PLAN DETAILS AND NOTES.
10	SEE A600 SERIES FOR DOOR, WINDOW & STOREFRONT SCHEDULE & NOTES.
11	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 303, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1 ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED WALL BOXES OR THEIR ASSOCIATED FIXTURES.



1 DIMENSION PLAN - MEZZANINE

1/8" = 1'-0"



2 DIMENSION PLAN - SECOND FLOOR

1/8" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

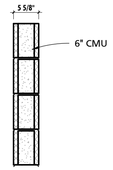
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: DIMENSION PLAN - MEZZ. & SECOND FLOOR
SHEET NUMBER: A106

7/20/2021 11:40:39 AM

SCHEDULE - INTERIOR WALL TYPES

MARK	WIDTH	DESCRIPTION	FIRE RATING RATING (HR)	FIRE RATING ASSEMBLY REF
M6B	5 5/8"	6" CMU TO EXTEND TO UNDERSIDE OF DECK ABOVE		
M8	7 5/8"	8" CMU TO EXTEND.		
M8B	7 5/8"	8" CMU TO EXTEND TO UNDERSIDE OF DECK ABOVE		
M8G1	7 5/8"	8" GROUND FACE CMU - 1 HR FIRE RATED - ONE SIDE POLISHED		
M8G1B	7 5/8"	8" GROUND FACE CMU TO EXTEND TO UNDERSIDE OF STRUCTURE ABOVE - ONE SIDE POLISHED		
M8G1R	7 5/8"	8" GROUND FACE CMU - 1 HR FIRE RATED - ONE SIDE POLISHED	1	U906
M8G2A	7 5/8"	8" GROUND FACE CMU TO EXTEND 8' - 8" A.F.F. - BOTH SIDES POLISHED		
M8G2R	7 5/8"	8" GROUND FACE CMU - 1 HR FIRE RATED - BOTH SIDES POLISHED	1	U906
M8R1	7 5/8"	8" CMU - 1 HR FIRE RATING	1	UL 906
M8R2	7 5/8"	8" CMU - 2 HR FIRE RATING	2	UL 906
M10G1R	9 5/8"	10" GROUND FACE CMU - 1 HR FIRE RATING - ONE SIDE POLISHED	1	UL 906
M10G2R	9 5/8"	10" GROUND FACE CMU - 1 HR FIRE RATING - BOTH SIDES POLISHED	1	UL 906
M10R1	9 5/8"	10" CMU - 1 HR FIRE RATING	1	UL 906
P1A	1 1/2"	7/8" METAL FURRING W/ 5/8" GWB ONE SIDE TO EXTEND 6" MIN ABOVE CEILING		
P4A	4 1/4"	3 5/8" METAL STUD W/ 5/8" GWB ONE SIDE TO EXTEND 6" MIN ABOVE CEILING		
P4B	4 1/4"	3 5/8" METAL STUD W/ 5/8" GWB ONE SIDE TO EXTEND TO UNDERSIDE OF DECK		
P5B	6 5/8"	6" METAL STUD W/ 5/8" GWB ONE SIDE TO EXTEND TO UNDERSIDE OF DECK		
P6R2	4 3/4"	2 1/2" C-T STUDS W/ (2) LAYERS 5/8" TYPE X GYPSUM WALL BOARD ONE SIDE AND 1" LINER PANEL THE OTHER SIDE - 2 HR FIRE RATING	2	UL 415
P7	4 7/8"	3-5/8" METAL STUD W/ 5/8" GYPSUM WALL BOARD EACH SIDE TO EXTEND TO UNDERSIDE OF COUNTERTOP		
P7A	4 7/8"	3-5/8" METAL STUD W/ 5/8" GYPSUM WALL BOARD EACH SIDE TO EXTEND 6" MIN ABOVE CEILING		
P7B	4 7/8"	3-5/8" METAL STUD W/ 5/8" GYPSUM WALL BOARD EACH SIDE TO EXTEND TO UNDERSIDE OF DECK		
P7R1	4 7/8"	3-5/8" METAL STUD W/ 5/8" TYPE X GYPSUM WALL BOARD EACH SIDE - 1 HR FIRE RATING	1	WP 1027
P7R.5	4 7/8"	3-5/8" METAL STUD W/ 5/8" TYPE X GYPSUM WALL BOARD EACH SIDE - 1/2 HR FIRE RATING	1/2	WP 1027
P8B	7 1/4"	6" METAL STUD W/ 5/8" GYPSUM WALL BOARD EACH SIDE TO EXTEND TO UNDERSIDE OF DECK		
P8R.5	7 1/4"	6" METAL STUD W/ 5/8" TYPE X GYPSUM WALL BOARD EACH SIDE - 1/2 HR FIRE RATING	1/2	WP 1027
P9B	9 1/4"	8" METAL STUD W/ 5/8" GYPSUM WALL BOARD EACH SIDE TO EXTEND TO UNDERSIDE OF DECK		

INTERIOR WALL TYPE DETAILS



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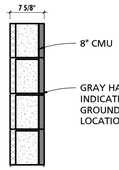

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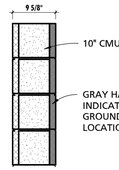

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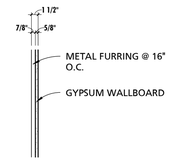
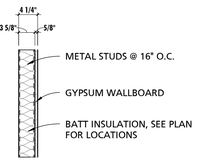
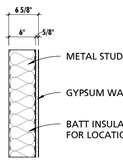


P1A



P4A/P4B



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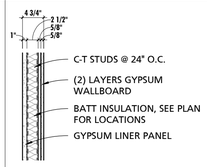

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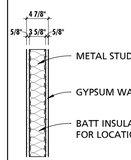

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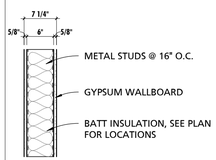
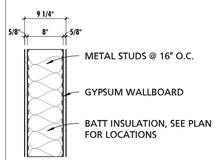


P8B/P8R.5



P9B

INTERIOR NON-LOAD BEARING / NON-STRUCTURAL PARTITION METAL STUD FRAMING SCHEDULE

HEIGHT	SHAPE	GAUGE	SPACING
0' - 13'	3-5/8"x1-1/4"	20	16" o/c
0' - 18'	3-5/8"x1-5/8"	18	16" o/c
0' - 19'	6"x1-1/4"	25	16" o/c
0' - 21'	8"x2"	18	16" o/c

NOTE: WHERE STUDS ARE PLACED AGAINST MASONRY OR CONCRETE WALLS FOR THE PURPOSES OF FURRING, HIGHER SPANS THAN INDICATED WITHIN THIS SCHEDULE ARE PERMITTED PROVIDED THAT TIE BACK BRACING IS PROVIDED AT 10'-0" O.C. MAX. SEE STRUCTURAL DRAWINGS FOR LOAD BEARING AND STRUCTURAL LIGHT GAUGE METAL STUDS.

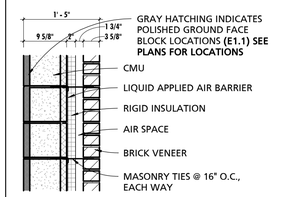
GENERAL PARTITION NOTES

NOTE #	NOTE
1	PROVIDE FIBERGLASS REINFORCED MOISTURE RESISTANT GYPSUM WALL BOARD IN ALL EQUIPMENT ROOMS, JANITOR'S CLOSETS, RESTROOMS, KITCHENS AND OTHER WET AREAS. PROVIDE FIBERGLASS REINFORCED MOISTURE RESISTANT WALL BOARD IN ALL OTHER AREAS WITHIN 8'-0" OF WATER SOURCE.
2	CONTRACTOR SHALL PROVIDE BLOCKING AND NAILERS AS REQUIRED TO SUPPORT ALL NEW WORK, INCLUDING ITEMS TO BE PROVIDED AND/OR INSTALLED BY OWNER.
3	ALL CORRIDOR AND FIRE-RATED PARTITIONS SHALL BE EXTENDED TO THE UNDERSIDE OF THE STRUCTURE ABOVE, U.N.O. THE PERIMETER WALLS OF ANY SPACE NOT PROVIDED WITH A CEILING SHALL EXTEND THE THE UNDERSIDE OF DECK ABOVE.
4	PROVIDE DEFLECTION TRACKS AT TOP OF ALL NON-LOAD BEARING STUD WALLS EXTENDING TO THE UNDERSIDE OF STRUCTURE ABOVE, U.N.O.
5	PROVIDE CONCRETE BACKER BOARD IN LIEU OF GYPSUM WALL BOARD WHERE TILE FINISH IS INDICATED.
6	ALL FIRE WALLS SHALL BE PLACARDED OR STENCILED ON BOTH SIDES WITH THE PHRASE "FIRE WALL" PER IBC SECTION 703.7.1. THE LETTERS SHALL BE RED IN COLOR, 6" INCHES HIGH AND A MIN. OF 3/4" WIDE. THE PHRASE SHALL BE WRITTEN ONCE FOR EACH 15 FEET OF HORIZONTAL WALL LENGTH. THIS SIGNAGE MAY BE LOCATED IN THE CONCEALED SPACE ABOVE A CEILING.
7	SEE METAL STUD PARTITION FRAMING SCHEDULE FOR INTERIOR PARTITION REQUIREMENTS.
8	MOISTURE RESISTANT GYPSUM WALL BOARD SHALL BE UTLILIZED IN ALL AREAS WHERE GYPSUM WALL BOARD IS TO BE DIRECTLY ADHERED TO CONCRETE OR MASONRY SURFACES IN INTERIOR APPLICATIONS. SUBSTRATE SHALL BE CLEANED AS REQUIRED AND FREE OF DUST, DEBRIS, AND MOISTURE PRIOR TO ADHESION AND FINISHING.
9	CONSTRUCTION OF RATED WALL ASSEMBLIES SHALL BE STRICTLY ADHERED TO IN ACCORDANCE WITH UL AND/OR GYPSUM ASSEMBLY SPECIFICATIONS. REFER TO CODE PLANS FOR ADDITIONAL INFORMATION.
10	PROVIDE A BULLNOSE CMU AT ALL OUTSIDE CORNERS OF INTERIOR MASONRY WALLS & SILLS.
11	PROVIDE IMPACT RESISTANT GYPSUM WALL BOARD IN THE FOLLOWING SPACES: CREW OFFICE 102, CORRIDOR 225, BATTALION OFFICE 224, BUNK 222, CORRIDOR 207, 211 (EXCEPT BEHIND METAL LOCKERS) BUNK 212, 213, 214, 215, 216, 217, FITNESS 230, KITCHEN / DINING 204, DAYROOM 203, STUDY 202. GYPSUM WALL BOARD ALONG KITCHEN WET WALLS & ISLAND TO BE MOISTURE RESISTANT, PER NOTE #1.
12	AT OPENINGS WHERE POLISHED GROUND FACE CMU OCCURS, HEAD, JAMB AND SILL RETURN FACE OF CMU SHALL ALSO RECEIVE POLISHED GROUND FACE FINISH.

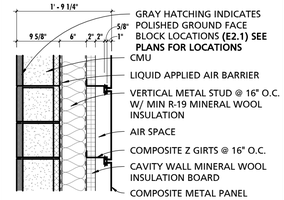
SCHEDULE - EXTERIOR WALL TYPES

MARK	WIDTH	DESCRIPTION
E1	17"	10" CMU W/ LIQUID APPLIED AIR BARRIER, 2" RIGID INSULATION, 1 3/4" AIR SPACE AND BRICK VENEER
E1.1	17"	10" POLISHED GROUND FACE CMU W/ LIQUID APPLIED AIR BARRIER, 2" RIGID INSULATION, 1 3/4" AIR SPACE AND BRICK VENEER
E2	21 1/4"	10" CMU W/ LIQUID APPLIED AIR BARRIER, 6" METAL STUDS W/ MIN R-19 MINERAL WOOL INSULATION, 4" Z GIRTS W/ MIN R-9 MINERAL WOOL INSULATION BOARD AND COMPOSITE METAL PANEL SYSTEM
E2.1	21 1/4"	10" POLISHED GROUND FACE CMU W/ LIQUID APPLIED AIR BARRIER, 6" METAL STUDS W/ MIN R-19 MINERAL WOOL INSULATION, 4" Z GIRTS W/ MIN R-9 MINERAL WOOL INSULATION BOARD AND COMPOSITE METAL PANEL SYSTEM
E3	10 1/8"	6" METAL STUD W/ MIN R-19 MINERAL WOOL INSULATION, 5/8" GYPSUM WALLBOARD ONE SIDE AND 5/8" EXTERIOR GYSPUMS SHEATHING, LIQUID APPLIED AIR BARRIER, 2" VERTICAL Z GIRTS TO OCCUR AT EACH METAL STUD W/ MIN R-10 RIGID INSULATION, AND FIBER CEMENT PANEL.

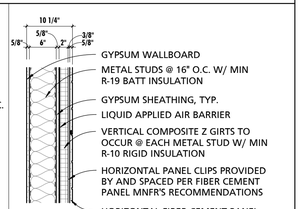
EXTERIOR WALL TYPE DETAILS



E1/E1.1 (U902: 1 HR RATED)*



E2/E2.1 (U906: 1 HR RATED)*/**



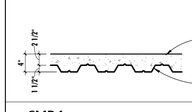
E3

*1 HOUR EXTERIOR WALL RATINGS ONLY APPLY TO AREAS OF EXTERIOR WALLS INDICATED ON CODE PLAN.
**10" CMU BLOCK CLAD IN NON-COMBUSTIBULE RAINSCREEN/INSULATION

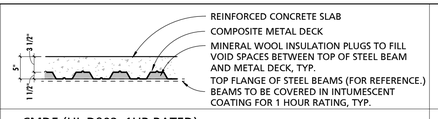
SCHEDULE - FLOOR ASSEMBLY TYPES

MARK	DESCRIPTION	FIRE RATING RATING (HR)	FIRE RATING ASSEMBLY REF	STC RATING
CMD4	4" TOTAL THICK REINFORCED CONCRETE SLAB OVER 1 1/2" COMPOSITE METAL DECK			
CMD5	5" TOTAL THICK REINFORCED CONCRETE SLAB OVER 1 1/2" COMPOSITE METAL DECK	1	UL D902	
CMD6	6" TOTAL THICK REINFORCED CONCRETE SLAB OVER 3" COMPOSITE METAL DECK			
PED1	ADJUSTABLE PEDESTAL SYSTEM W/ RADIANT HEAT PANELS AND CONCRETE PAVERS			
SOG4	4" REINFORCED CONCRETE SLAB OVER VAPOR BARRIER AND POROUS FILL. RIGID INSULATION TO BE USED W/ AREAS TO RECIEVE RADIANT FLOOR HEATING			
SOG8	8" REINFORCED CONCRETE SLAB OVER VAPOR BARRIER, 1" RIGID INSULATION AND POROUS FILL. RIGID INSULATION TO BE USED W/ AREAS TO RECIEVE RADIANT FLOOR HEATING			
SOG12	12" REINFORCED CONCRETE SLAB OVER VAPOR BARRIER			

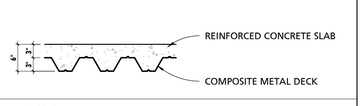
FLOOR ASSEMBLY TYPE DETAILS



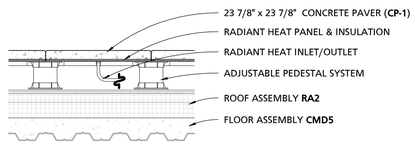
CMD4



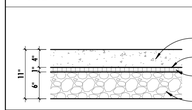
CMD5 (UL D902: 1HR RATED)



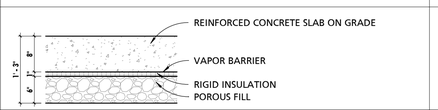
CMD6



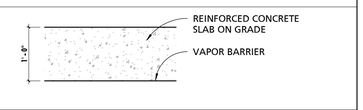
PED1



SOG4



SOG8

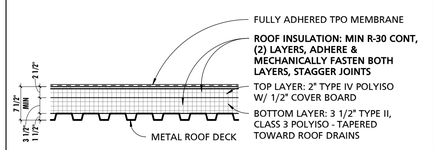


SOG12

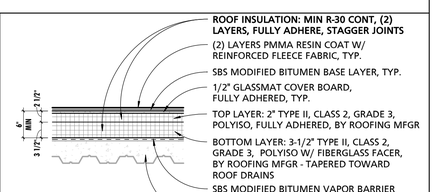
ROOF ASSEMBLY TYPES

TYPE MARK	DESCRIPTION	COMMENTS
RA1	80 MIL TPO MEMBRANE OVER 1/2" HIGH-DENSITY POLY-ISO BOARD, MIN 5 1/2" RIGID INSULATION AND 1 1/2" METAL DECK	
RA2	90 MIL PMMA RESIN MEMBRANE OVER 1/2" GLASSMAT COVER BOARD AND MIN 5 1/2" RIGID INSULATION OVER 110 MIL SBS MODIFIED BITUMEN VAPOR BARRIER	ROOF ASSEMBLY TO OCCUR OVER FLOOR ASSEMBLY CMD5 @ COURTYARD

ROOF ASSEMBLY TYPE DETAILS



RA1



RA2

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

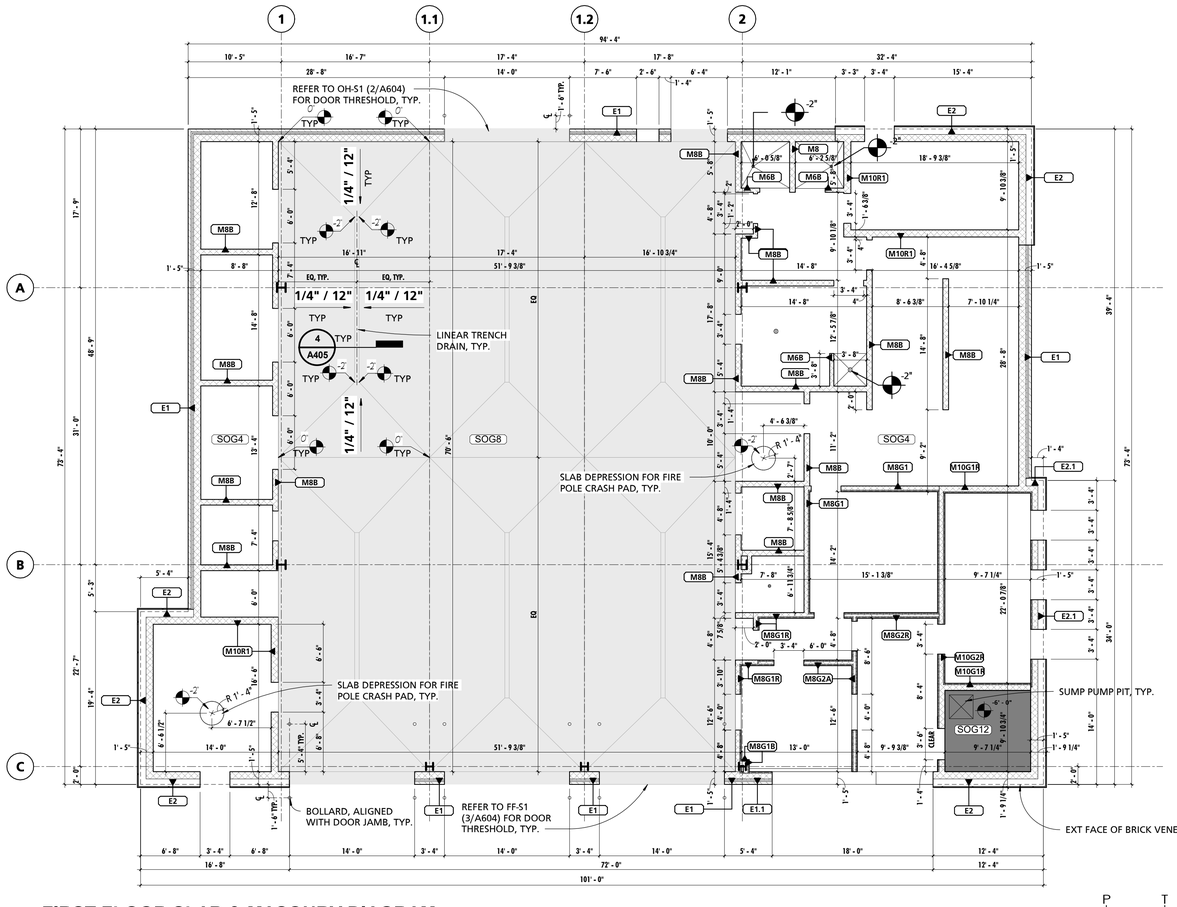
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: BUILDING ASSEMBLY TYPES & DETAILS
SHEET NUMBER: A107

7/20/2021 11:40:45 AM

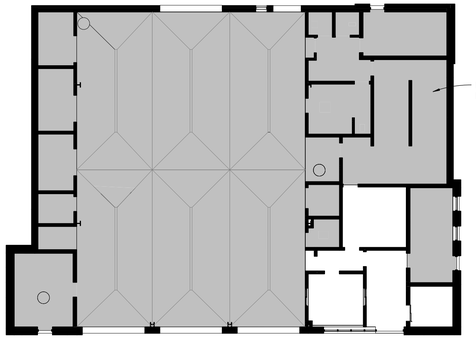


1 FIRST FLOOR SLAB & MASONRY DIAGRAM

1/8" = 1'-0"

SLAB TYPE LEGEND

- SOG4
- SOG8
- SOG12



2 RADIANT SLAB INSULATION DIAGRAM

1/16" = 1'-0"

GENERAL NOTES:

1. DATUM ELEVATIONS ARE PROVIDED FOR REFERENCE. CONTRACTORS SHALL BE RESPONSIBLE FOR SLOPING SLABS AS REQUIRED TO PROVIDE PROPER FALL TOWARDS FLOOR DRAINS AS NECESSARY.

2. REFERENCE PLUMBING DRAWINGS FOR ALL DRAIN LOCATIONS.

3. REFERENCE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON CONTROL/EXPANSION JOINT LOCATIONS.

4. CONTRACTORS TO COORDINATE FINAL LOCATION/SIZE REQUIREMENTS OF ALL EQUIPMENT SLABS PRIOR TO POURING.

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EXPIRATION DATE: 6-30-2023

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SLAB/MASONRY DIAGRAM - FIRST FLOOR
SHEET NUMBER: A108

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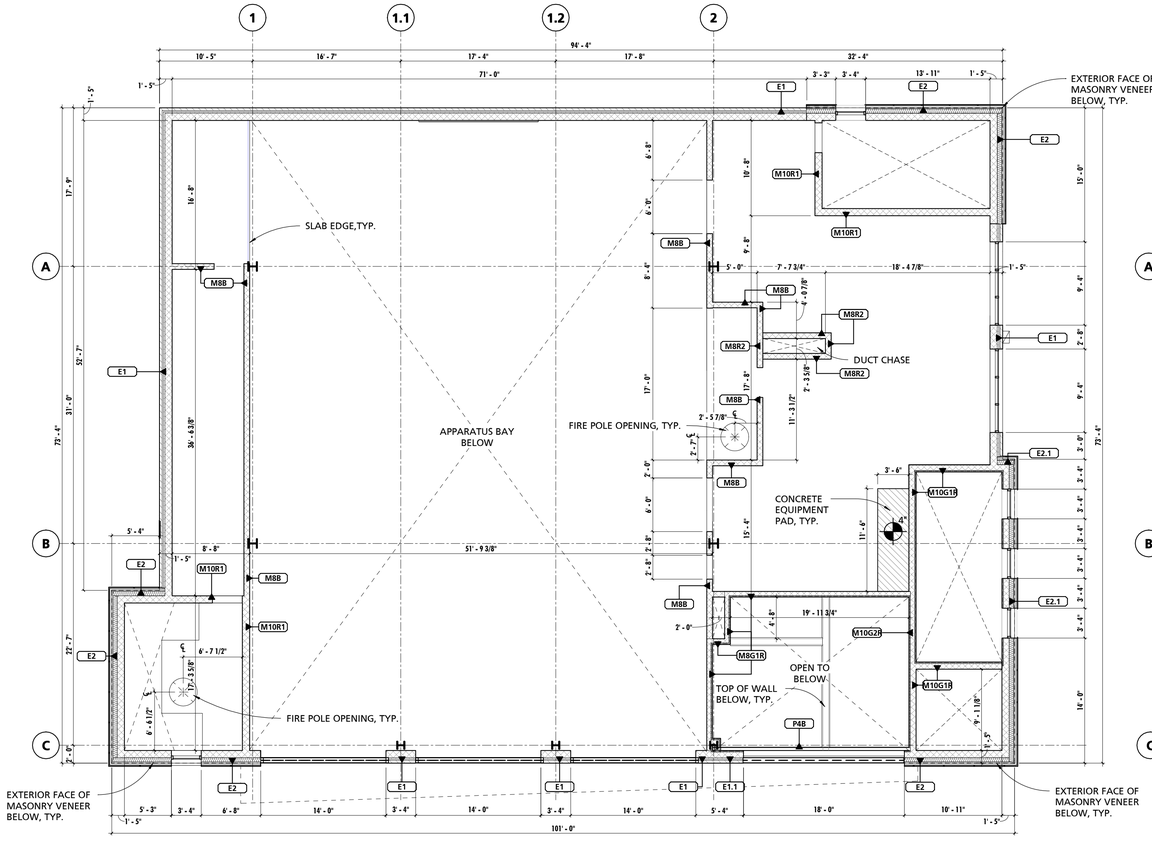
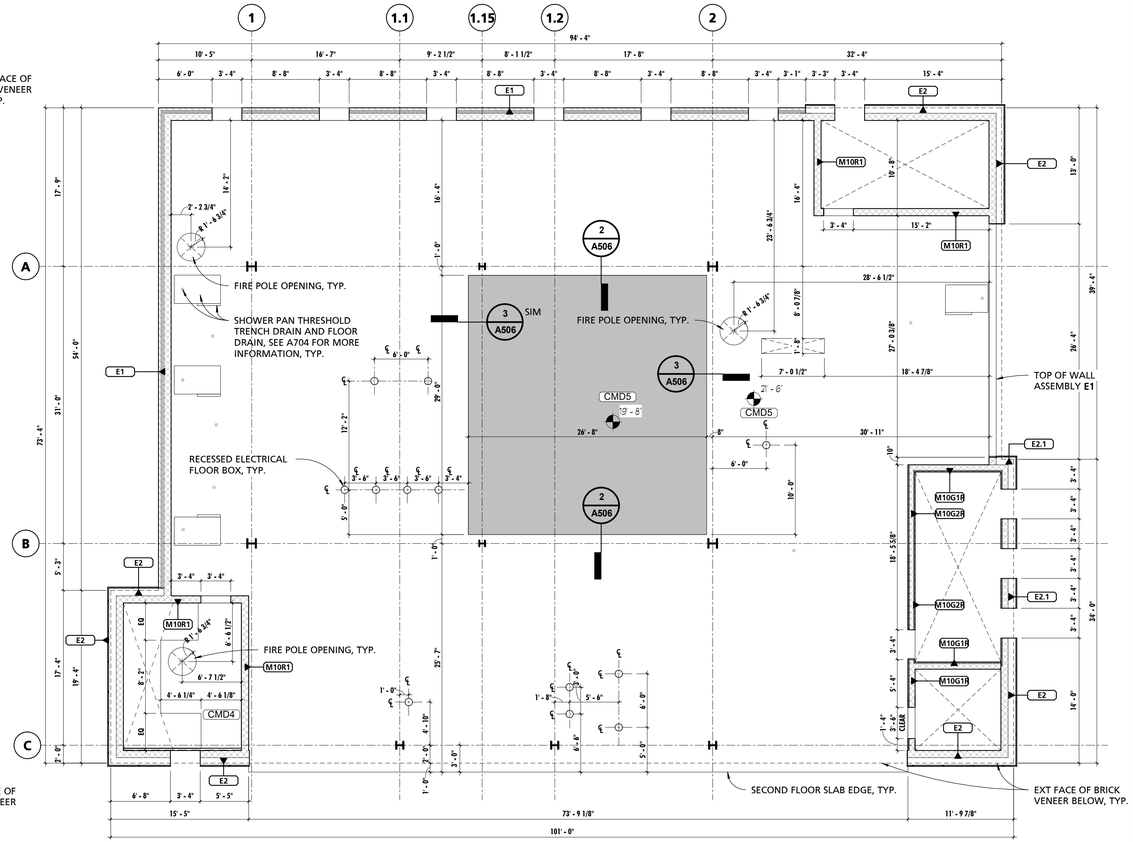


1 MEZZANINE FLOOR SLAB & MASONRY DIAGRAM

1/8" = 1'-0"



2 SECOND FLOOR SLAB & MASONRY DIAGRAM

1/8" = 1'-0"

GENERAL NOTES:

1. DATUM ELEVATIONS ARE PROVIDED FOR REFERENCE. CONTRACTORS SHALL BE RESPONSIBLE FOR SLOPING SLABS AS REQUIRED TO PROVIDE PROPER FALL TOWARDS FLOOR DRAINS AS NECESSARY.

2. REFERENCE PLUMBING DRAWINGS FOR ALL DRAIN LOCATIONS.

3. REFERENCE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON CONTROL/EXPANSION JOINT LOCATIONS.

4. CONTRACTORS TO COORDINATE FINAL LOCATION/SIZE REQUIREMENTS OF ALL EQUIPMENT SLABS PRIOR TO POURING.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

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1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SLAB/MASONRY DIA. - MEZZ & SECOND FLOOR
SHEET NUMBER: A109

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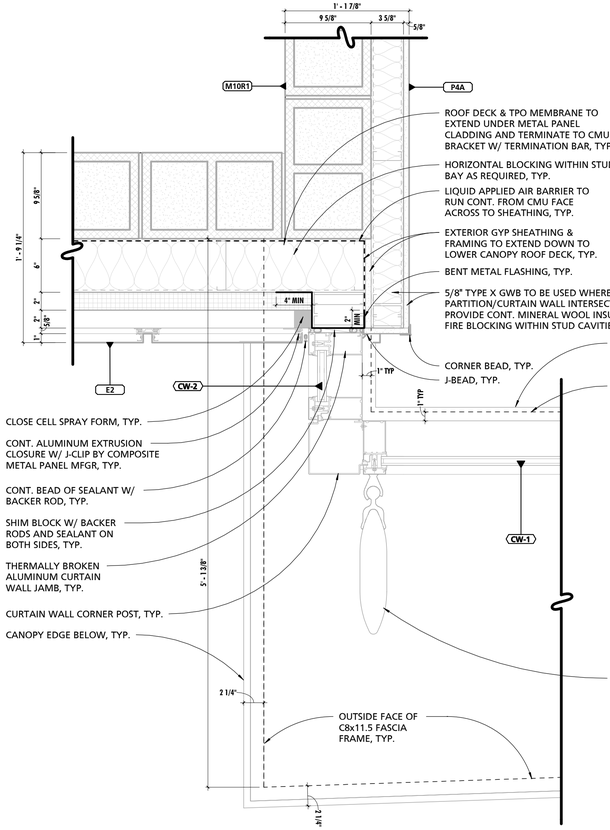
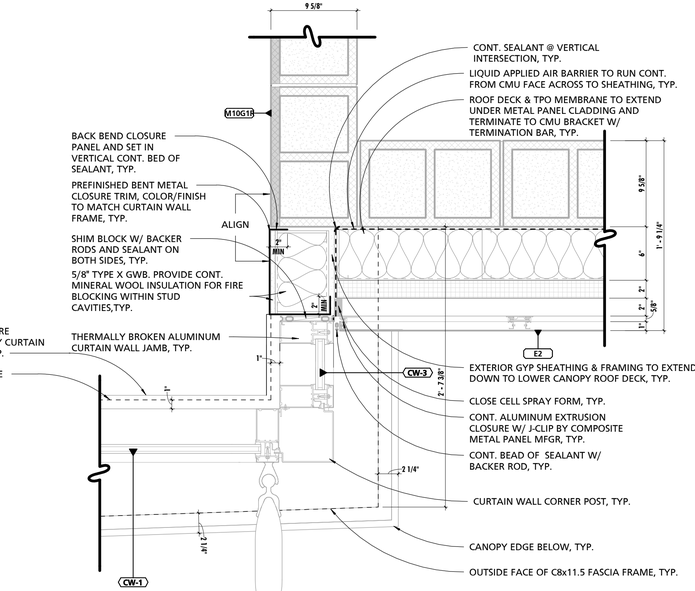


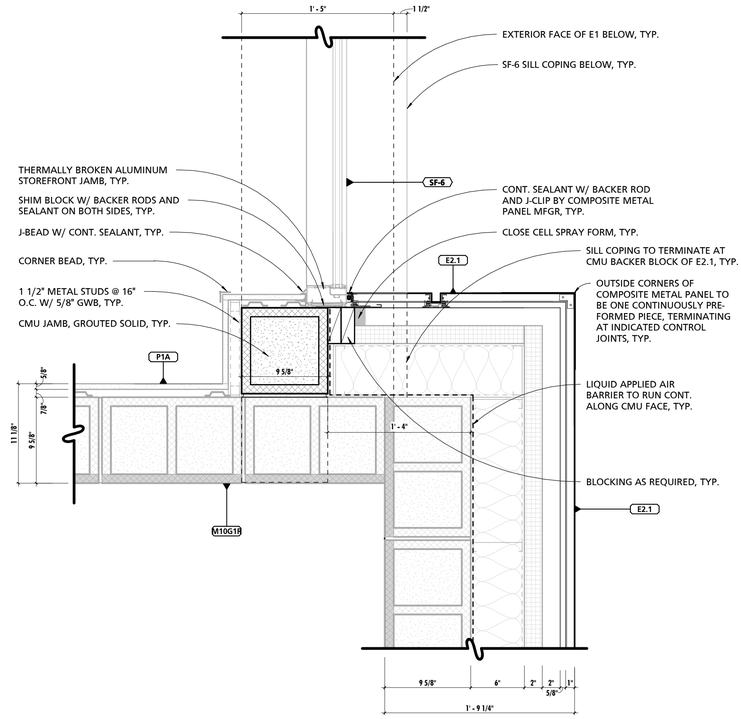
1 DETAIL @ CURTAINWALL CW-2 RETURN

1 1/2" = 1'-0"



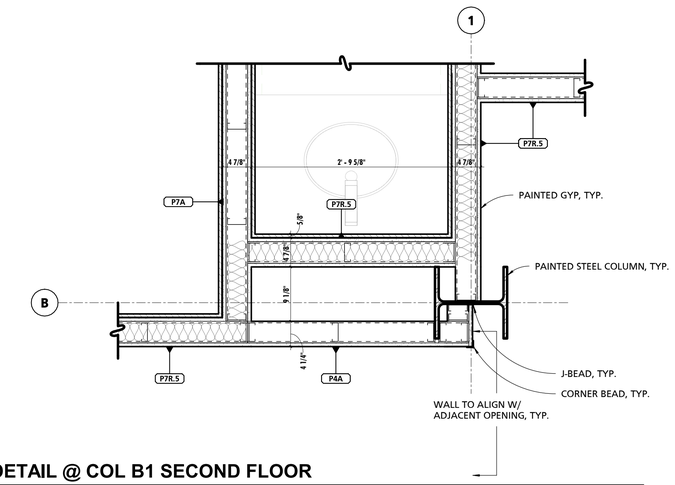
2 DETAIL @ CURTAINWALL CW-3 RETURN

1 1/2" = 1'-0"



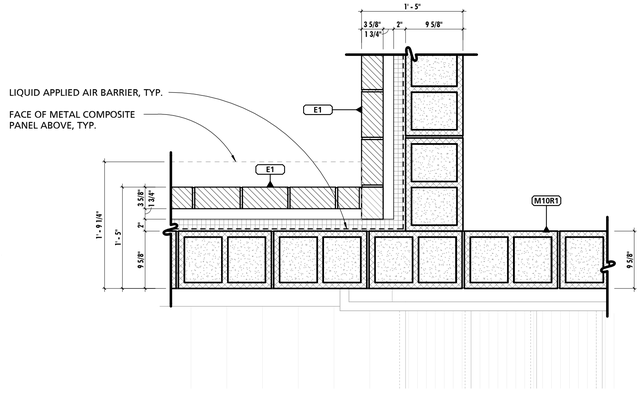
3 TYPICAL WALL JUNCTION @ E2.1 & SF-6

1 1/2" = 1'-0"



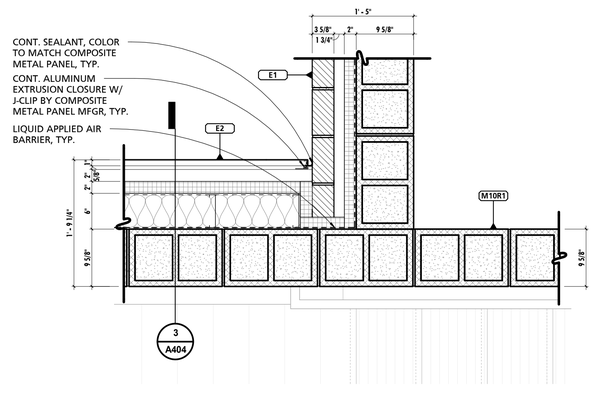
4 DETAIL @ COL B1 SECOND FLOOR

1" = 1'-0"



5 TYPICAL WALL JUNCTION @ WALL TYPE E1

1" = 1'-0"



6 TYPICAL WALL JUNCTION @ WALL TYPE E1 & E2

1" = 1'-0"

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CONSULTANT:

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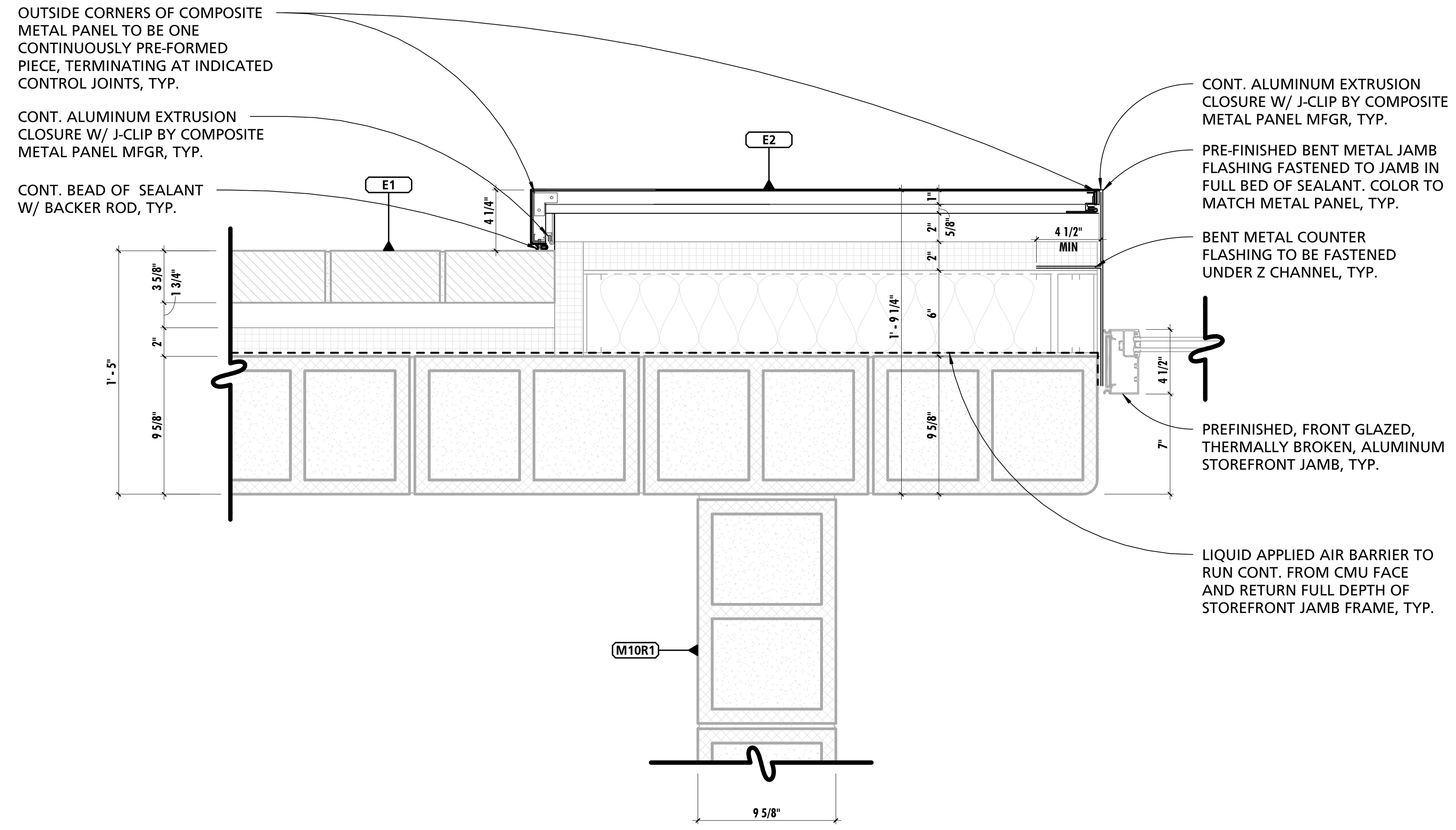
1201 N 9TH STREET, CITY OF READING, PA 19604

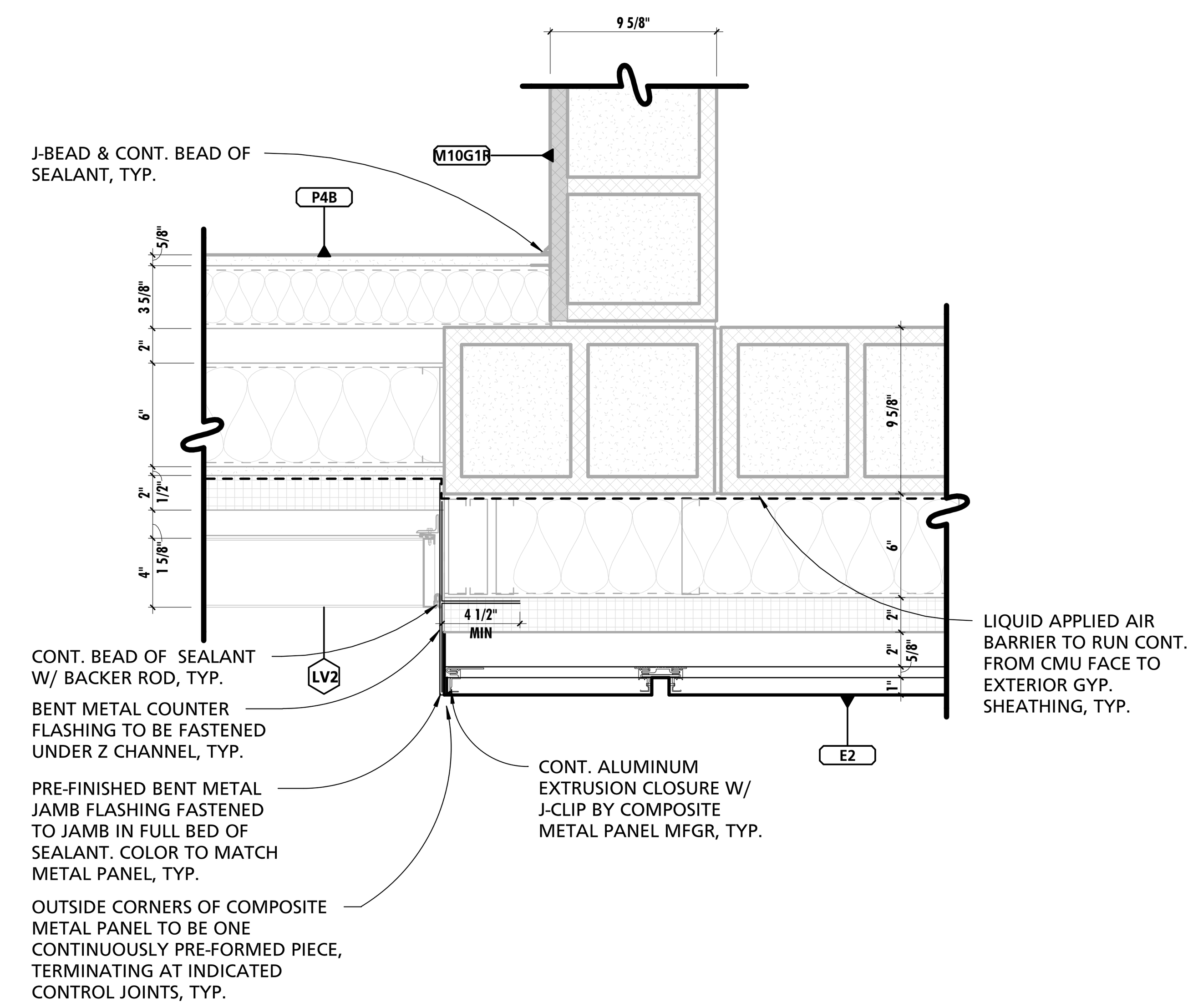
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: PLAN DETAILS
SHEET NUMBER: A110

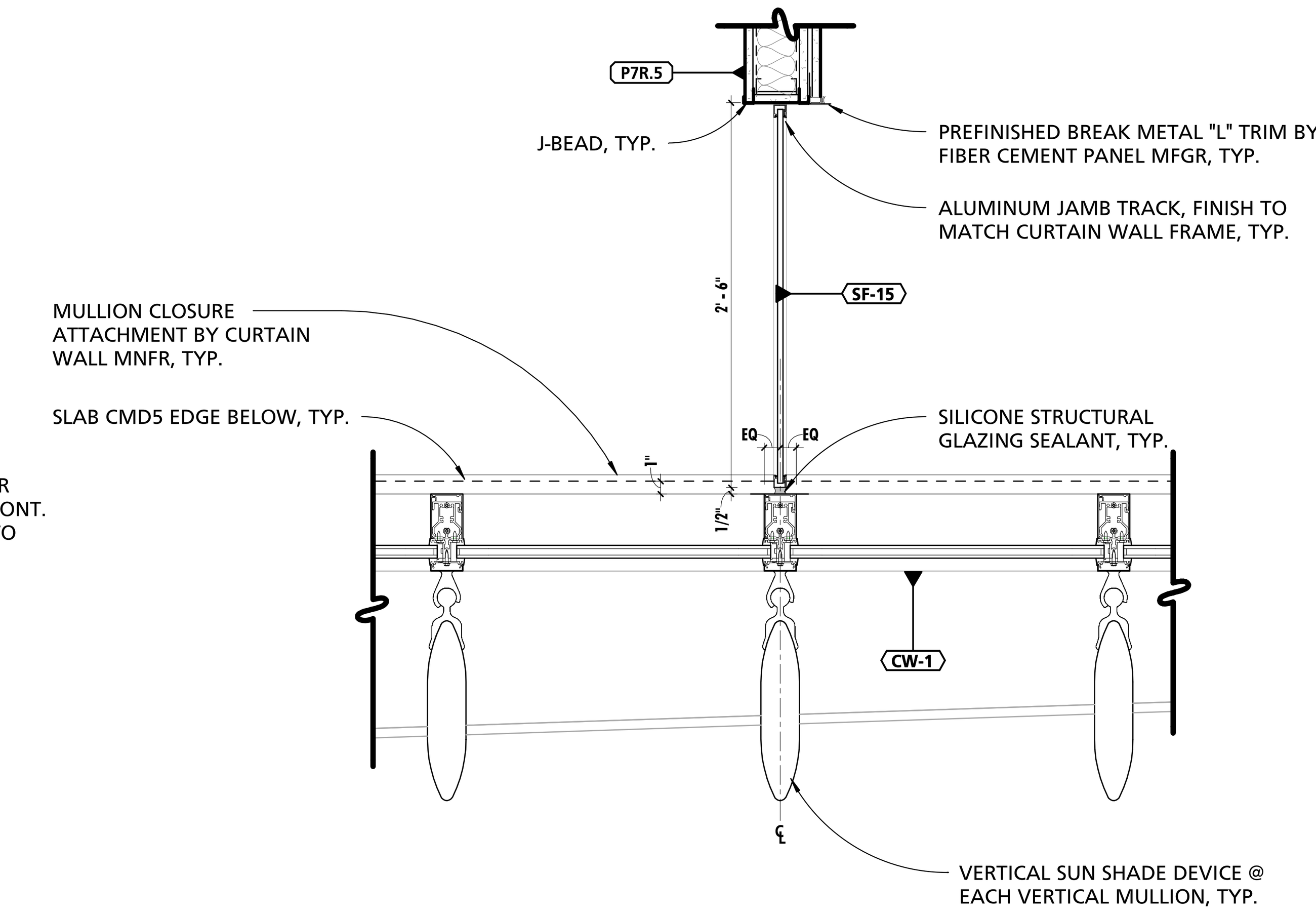
7/20/2021 11:40:55 AM



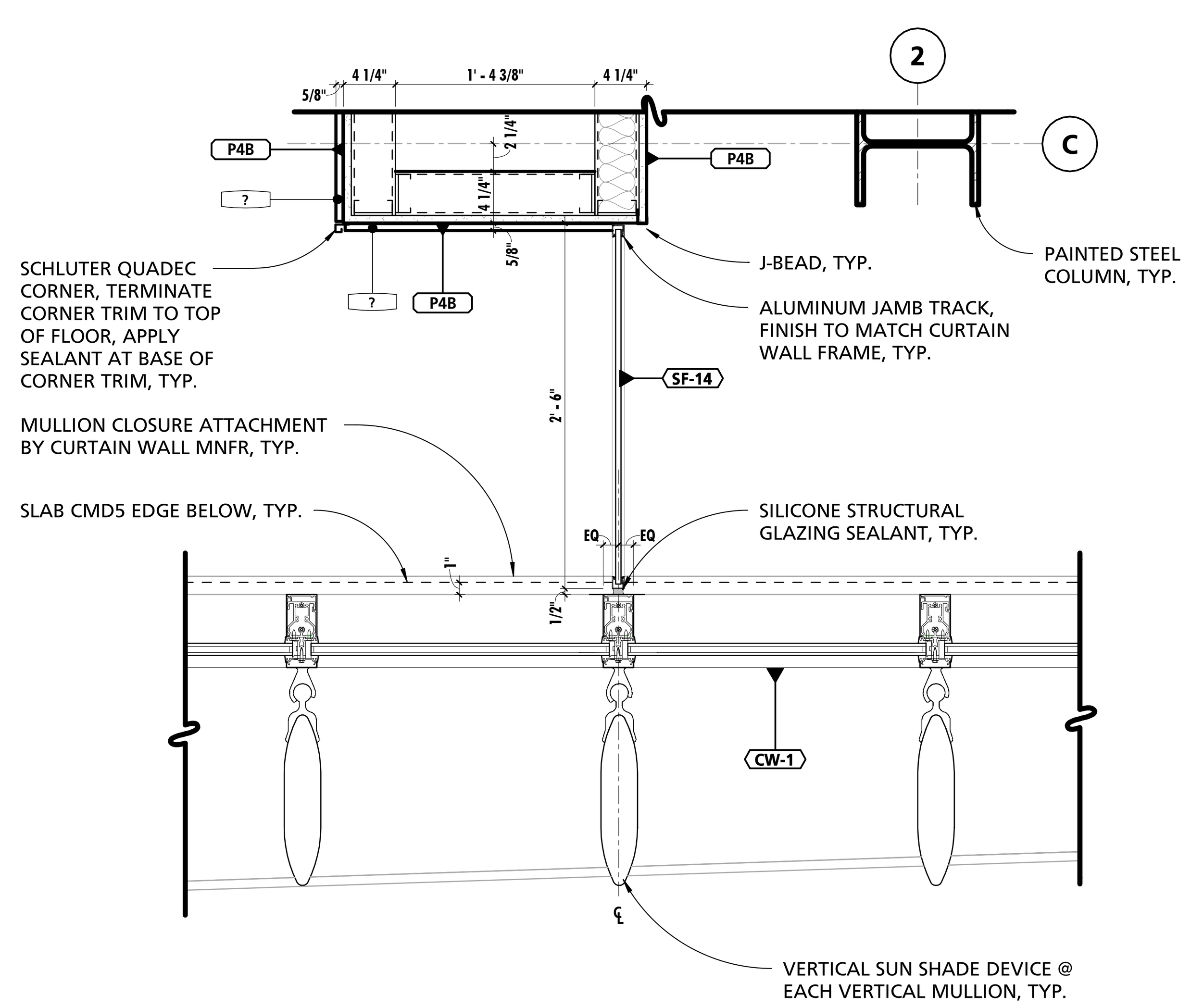
1 TYPICAL WALL JUNCTION @ WALL TYPE E1 & E2
1 1/2" = 1'-0"



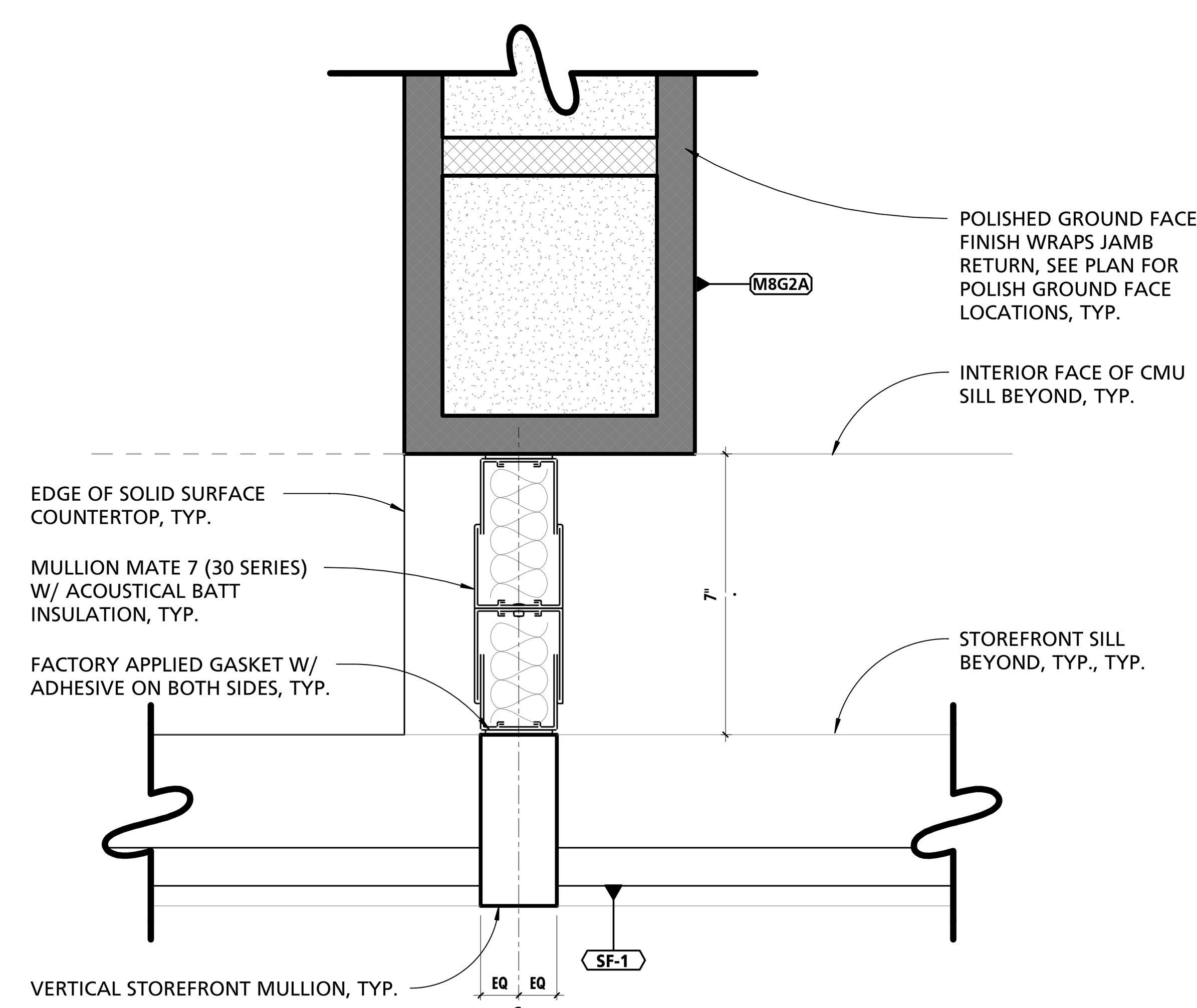
2 TYPICAL WALL JUCTION @ WALL TYPE E2 & LOUVER LV2
1 1/2" = 1'-0"



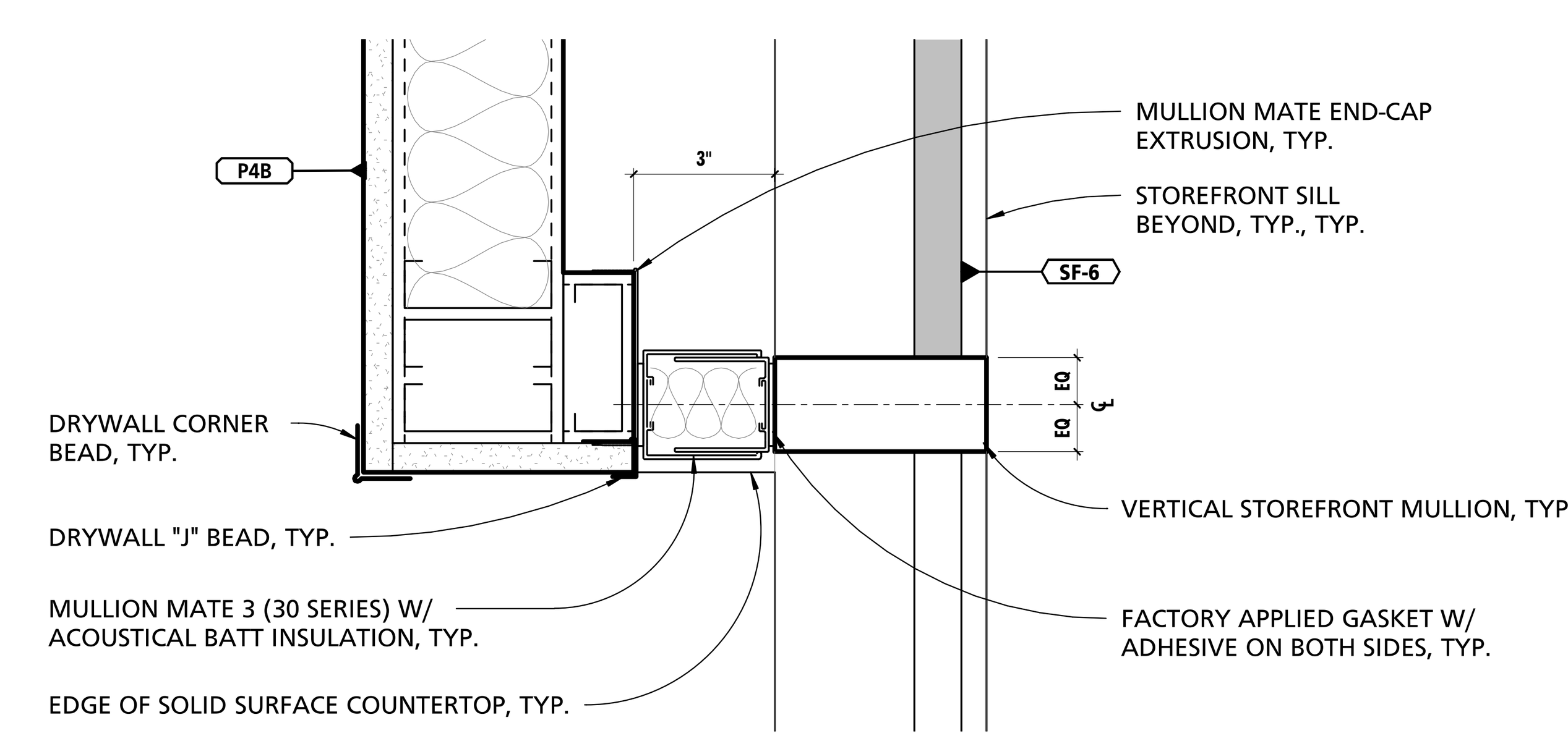
3 DETAIL @ SF-15 WEST
1" = 1'-0"



4 DETAIL @ SF-14 WEST
1" = 1'-0"



5 MULLION MATE DETAIL @ CMU
3" = 1'-0"



6 TYPICAL MULLION MATE DETAIL @ STOREFRONT MULLION
3" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

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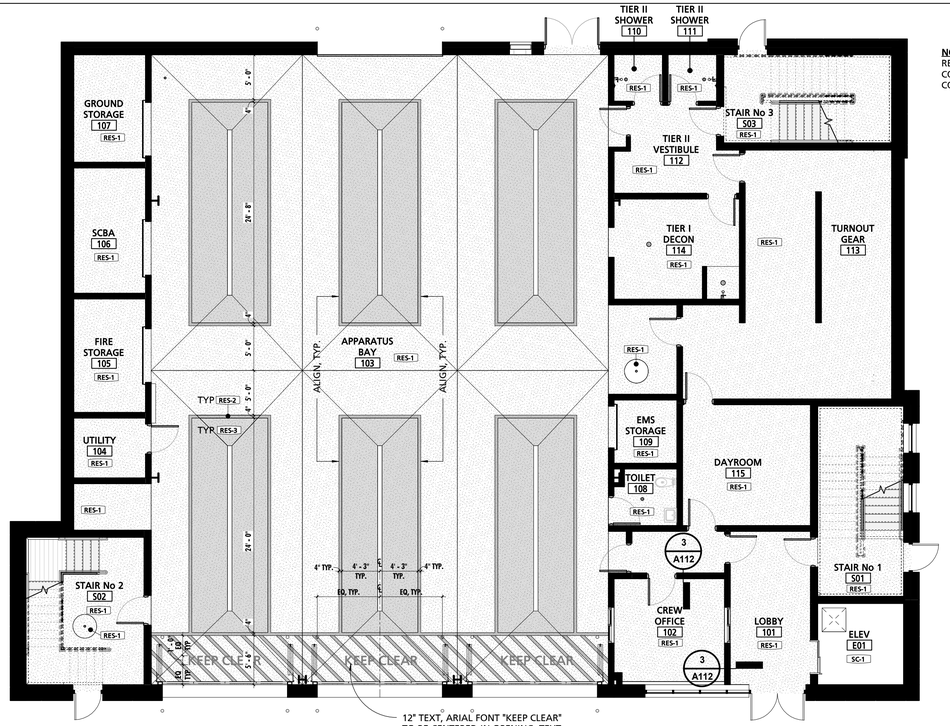
NO.	DESCRIPTION	DATE

PROJECT NUMBER:
20-088
PROJECT SET:
23A MECHANICAL RE-BID
DATE ISSUED:
09/13/2021
DRAWING TITLE:
PLAN DETAILS
SHEET NUMBER:
A111

7/20/2021 11:40:58 AM



NOTE- SEE G SERIES & A100 SERIES FOR AREAS TO RECEIVE INTUMESCENT COATING. INTUMESCENT COATINGS TO RECEIVE COMPATIBLE, TINTABLE, COLORIZED TOP COAT AT ALL LOCATIONS.

1 FIRST FLOOR FINISH PLAN
1/8" = 1'-0"

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

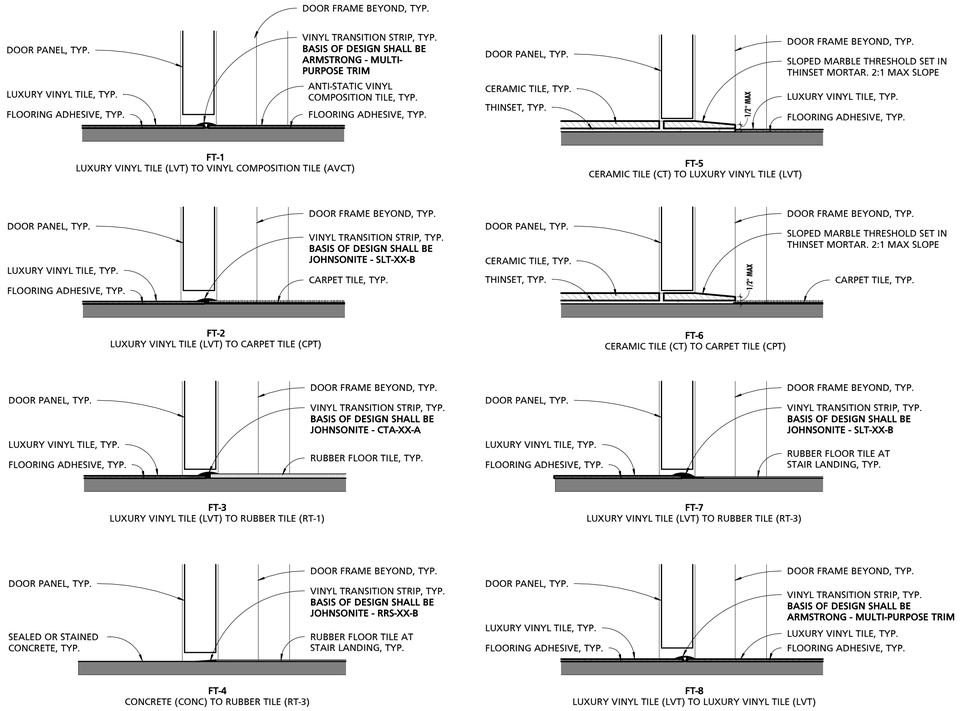
SCHEDULE - CEILING TYPES

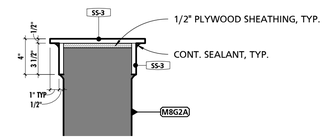
MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CLG-1	2x2 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-2.1	5/8" GWB ON 1 1/2" DRYWALL GRID	ARMSTRONG	DRYWALL GRID SYSTEM	GYPSUM BOARD IS PAINTED.
CLG-2.2	5/8" GWB ON 7/8" HAT CHANNEL	N/A	N/A	GYPSUM BOARD IS PAINTED.
CLG-3	12" PREFINISHED SOFFIT PANEL	PAC-CLAD	SOLID FLUSH SOFFIT	
CLG-4	2x6 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-5	WOOD SLAT CEILING	ARMSTRONG	WOODWORKS GRILLE 7265	AREA/UTILITIES ABOVE CEILING PAINTED FLAT BLACK.

SCHEDULE - FINISHES

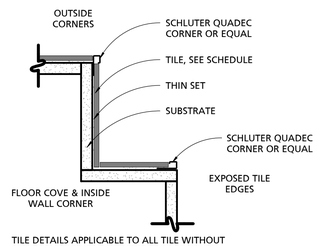
RM #	ROOM NAME	FLOOR FINISH	BASE	WALL FINISH NORTH	WALL FINISH SOUTH	WALL FINISH EAST	WALL FINISH WEST	CEILING FINISH	COMMENTS
101	LOBBY	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
102	CREW OFFICE	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
103	APPARATUS BAY	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2/HPC-3	RES-2 BOARDER STRIPING AND TEXT TO BE REFLECTIVE. SEE RCP FOR EXPOSED STRUCTURE PAINT COLOR LOCATIONS.
104	UTILITY	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
105	FIRE STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
106	SCBA	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
107	GROUND STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
108	TOILET	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	CLG-2.1	
109	EMS STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
110	TIER II SHOWER	RES-1	B-2	EPX-1	EPX-1	EPX-1	EPX-1	CLG-2.1	
111	TIER II SHOWER	RES-1	B-2	EPX-1	EPX-1	EPX-1	EPX-1	CLG-2.1	
112	TIER II VESTIBULE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
113	TURNOUT GEAR	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
114	TIER I DECON	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
115	DAYROOM	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	CLG-4	
116	CORRIDOR	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
200.1	MECHANICAL/ TRAINING MEZZANINE	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
200.2	POLE MEZZ	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
200.3	STORAGE	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
201	CORRIDOR	LVT-1	B-1	PT-1	N/A	EF-6	PB-1	CLG-5	
202	STUDY	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	
203	DAYROOM	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	SEE FINISH PLAN & INT ELEV FOR WALL FINISHES
204	KITCHEN/DINING	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	SEE FINISH PLAN & INT ELEV FOR WALL FINISHES
205	JAN	LVT-1	B-1	FRP	FRP	FRP	FRP	CLG-2.1	
206	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
207	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	
208	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
209	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
210	POLE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
211	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	SEE FINISH PLAN FOR ADDITIONAL WALL FINISHES
212	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
213	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
214	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
215	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
216	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
217	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
218	COURTYARD	CP-1	N/A	EF-6	EF-6	EF-6	EF-6	N/A	
219.1	POLE	SC-1	B-1	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
219.2	POLE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
220	LAUNDRY/ JAN	CT-1	WT-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
222	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
223	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
224	BATTALION OFFICE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
225	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	
226	CONFERENCE	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
227	IT	AVCT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
228	TOILET	CT-1	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
229	ELEC	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
230	FITNESS	RT-1	B-1	PT-1	PT-1	PT-1	PT-1	PT-1	
E01	ELEV	SC-1	N/A	N/A	N/A	N/A	N/A	N/A	
501	STAIR No 1	RES-1/RT-2/RT-3	B-1/B-3	PB-1	PB-1	PB-1	PB-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
502	STAIR No 2	RES-1/RT-2/RT-3	B-1/B-3	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
503	STAIR No 3	RES-1/RT-2/RT-3	B-1/B-3	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
S04	ROOF STAIR	RT-1	B-1	PT-1	PT-1	PT-1	PT-1	HPC-2	

2 FLOORING TRANSITION DETAILS
3" = 1'-0"

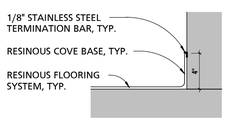




3 TYPICAL WALL CAP DETAIL
1 1/2" = 1'-0"



4 TYPICAL TILE EDGE DETAILS
NOT TO SCALE



5 RESINOUS COVE DETAIL
1 1/2" = 1'-0"

MW STUDIOS
ARCHITECTURE + MASTER PLANNING
10839-D PHILADELPHIA RD
WHITE MARSH, MD 21162
(P) 410-344-1460
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WWW.MWSARCH.COM

SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

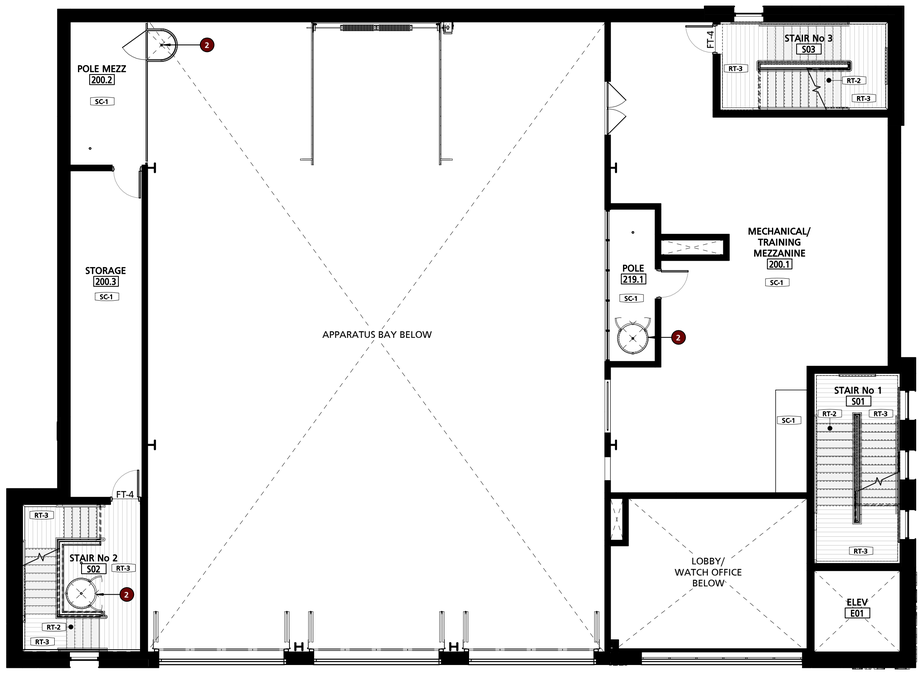
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

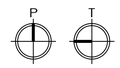
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FINISH PLAN - FIRST FLOOR & DETAILS
SHEET NUMBER: A112

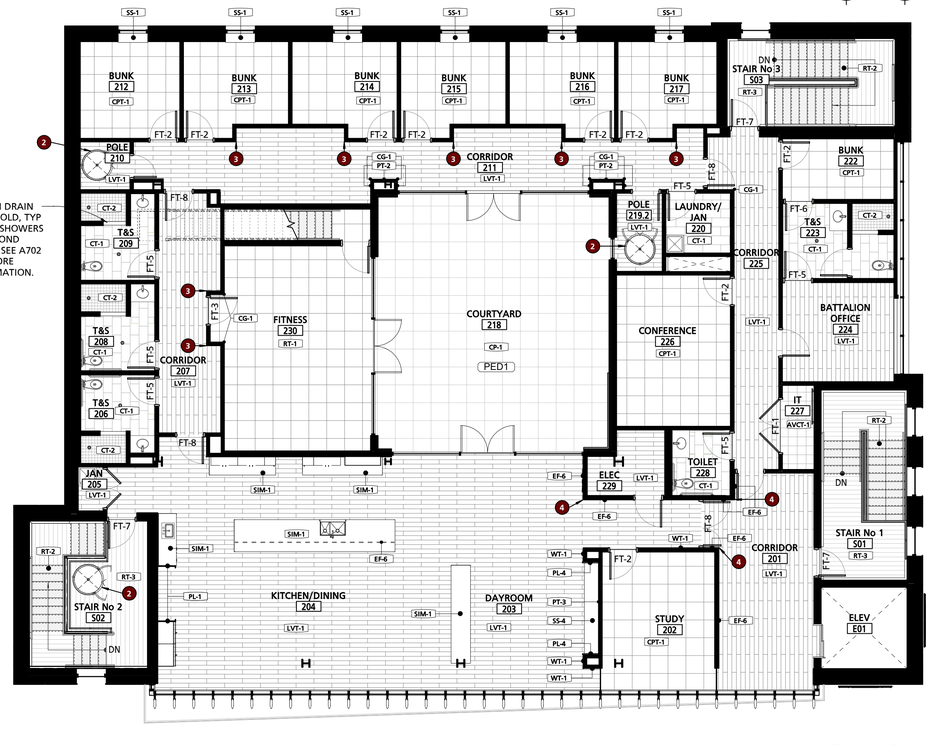
7/20/2021 11:41:07 AM



1 MEZZANINE LEVEL FINISH PLAN

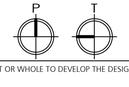
1/8" = 1'-0"





2 SECOND FLOOR FINISH PLAN

1/8" = 1'-0"



0 TYPICAL FINISH KEYNOTES

NO.	NOTE
1	FIBER-CEMENT PANEL CONTROL JOINT LOCATION. CONTROL JOINT TO BE ALIGNED W/ JOINT OF FACTORY OUTSIDE CORNER PANEL WHERE PROVIDED.
2	FIRE POLE & GATE ENCLOSURE TO BE FACTORY FINISHED & PRE-ASSEMBLED BY MNFR
3	GWB CONTROL JOINT TO ALIGN W/ LOCKER ALCOVE
4	WHERE EF-6 IS USED IN INTERIOR APPLICATION, OUTSIDE CORNER SHALL BE MITERED. BOTTOM PANEL TO BE HELD 1/4" OFF FINISH FLOOR.

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

SCHEDULE - EXTERIOR FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
EF-1	STANDARD BRICK VENEER	GLEN GERY	SIOUX CITY - EBONITE VELOUR	
EF-2	COMPOSITE METAL WALL PANEL	PAC-CLAD	PAC-3000 RS - DEEP BLACK	
EF-3	PREFINISHED METAL FASCIA		ANODIZED ALUM	
EF-4	PREFINISHED METAL COPING	PAC-CLAD	DEEP BLACK	MATCH METAL PANEL COLOR
EF-6	HORIZONTAL FIBER CEMENT SIDING	NICHIHA	VINTAGEWOOD - CEDAR	
EF-7	PAINTED STEEL LINTEL			EXPOSED STEEL PAINTED IN H.P.C.

SCHEDULE - FINISHES

RM #	ROOM NAME	FLOOR FINISH	BASE	WALL FINISH NORTH	WALL FINISH SOUTH	WALL FINISH EAST	WALL FINISH WEST	CEILING FINISH	COMMENTS
101	LOBBY	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
102	CREW OFFICE	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
103	APPARATUS BAY	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2/HPC-3	RES-2 BOARDER STRIPING AND TEXT TO BE REFLECTIVE. SEE RCP FOR EXPOSED STRUCTURE PAINT COLOR LOCATIONS.
104	UTILITY	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
105	FIRE STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
106	SCBA	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
107	GROUND STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
108	TOILET	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	CLG-2.1	
109	EMS STORAGE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
110	TIER II SHOWER	RES-1	B-2	EPX-1	EPX-1	EPX-1	EPX-1	CLG-2.1	
111	TIER II SHOWER	RES-1	B-2	EPX-1	EPX-1	EPX-1	EPX-1	CLG-2.1	
112	TIER II VESTIBULE	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
113	TURNOUT GEAR	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
114	TIER I DECON	RES-1	B-2	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
115	DAYROOM	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	CLG-4	
116	CORRIDOR	RES-1	B-2	PB-1	PB-1	PB-1	PB-1	HPC-2	
200.1	MECHANICAL/ TRAINING MEZZANINE	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
200.2	POLE MEZZ	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
200.3	STORAGE	SC-1	N/A	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
201	CORRIDOR	LVT-1	B-1	PT-1	N/A	EF-6	PB-1	CLG-5	
202	STUDY	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	
203	DAYROOM	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	SEE FINISH PLAN & INT ELEV FOR WALL FINISHES
204	KITCHEN/DINING	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-5	SEE FINISH PLAN & INT ELEV FOR WALL FINISHES
205	JAN	LVT-1	B-1	FRP	FRP	FRP	FRP	CLG-2.1	
206	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
207	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	
208	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
209	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
210	POLE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
211	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	SEE FINISH PLAN FOR ADDITIONAL WALL FINISHES
212	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
213	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
214	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
215	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
216	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
217	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
218	COURTYARD	CP-1	N/A	EF-6	EF-6	EF-6	EF-6	N/A	
219.1	POLE	SC-1	B-1	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	
219.2	POLE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
220	LAUNDRY/ JAN	CT-1	WT-1	PT-1	PT-1	PT-1	PT-1	CLG-2.1	
222	BUNK	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
223	T&S	CT-1/CT-2	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
224	BATTALION OFFICE	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
225	CORRIDOR	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-4	
226	CONFERENCE	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
227	IT	AVCT-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
228	TOILET	CT-1	N/A	WT-2	WT-2	WT-2	WT-2	CLG-2.1	
229	ELEC	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	CLG-1	
230	FITNESS	RT-1	B-1	PT-1	PT-1	PT-1	PT-1	PT-1	
E01	ELEV	SC-1	N/A	N/A	N/A	N/A	N/A	N/A	
S01	STAIR No 1	RES-1/RT-2/RT-3	B-1/B-3	PB-1	PB-1	PB-1	PB-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
S02	STAIR No 2	RES-1/RT-2/RT-3	B-1/B-3	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
S03	STAIR No 3	RES-1/RT-2/RT-3	B-1/B-3	HPC-1	HPC-1	HPC-1	HPC-1	HPC-2	RT-3 @ LANDINGS, RT-2 @ TREADS
S04	ROOF STAIR	RT-1	B-1	PT-1	PT-1	PT-1	PT-1	HPC-2	

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

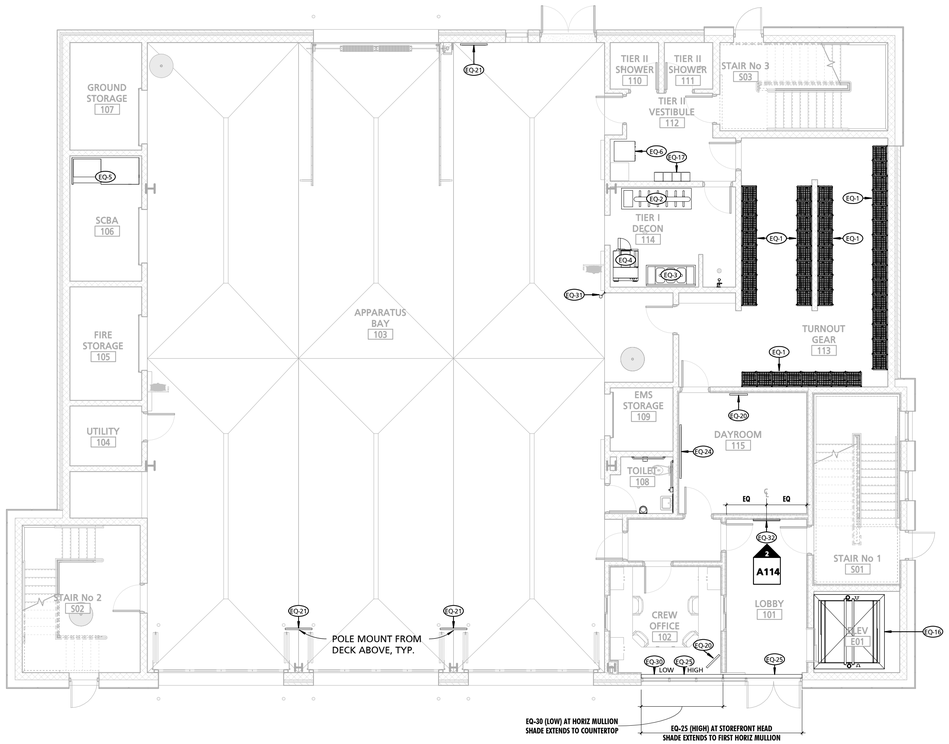
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FINISH PLAN - MEZZ & SECOND FLOOR

SHEET NUMBER: A113

7/20/2021 11:41:18 AM



1 FIRST FLOOR FFE PLAN

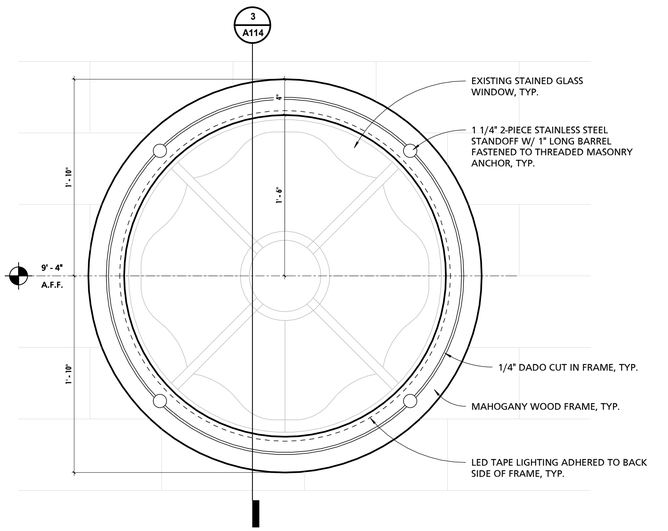
1/8" = 1'-0"

SCHEDULE - EQUIPMENT

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	OWNER FURNISH AND INSTALL	OWNER FURNISH CONTRACTOR INSTALL	CONTRACTOR FURNISH AND INSTALL	COMMENTS
EQ-1	STANDARD LOCKERS - WALL MOUNT - 20x20x72	GEARGRID CORPORATION	STANDARD FIRE STATION WALL MOUNT LOCKERS			●	1A PRIME CONTRACTOR TO PROVIDE W/ HANGER ROD, LOCKER DOOR W/ LOCKING CLASP & EXTRA ADJUSTABLE SHELF
EQ-2	EXISTING 6 SET SCARECROW DRYER	RAM AIR	120		●		1A PRIME CONTRACTOR TO RELOCATE FROM BASEMENT OF 1155N 9TH STREET FIREHOUSE
EQ-3	3 COMPARTMENT SINK W/ SIDEBOARDS	EAGLE GROUP	312-12-3-12			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-4	EXISTING COMMERCIAL EXTRACTOR	MILNOR	MWT27X5		●		PLUMBING PRIME CONTRACTOR TO RELOCATE FROM BASEMENT OF 1155N 9TH STREET FIREHOUSE
EQ-5	SCBA COMPRESSOR	ARCTIC	E4-10-A6			●	MECHANICAL PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-6	DOMESTIC STACKED WASHER DRYER MACHINE	CONTINENTAL GIRBAU	JSGSX			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-7	DOMESTIC DRYER MACHINE	WHIRLPOOL	WED5620HW			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-8	BUILT-IN CONVECTION OVEN / MICROWAVE	VIKING	VMDD5306SS			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-9	6 BURNER GAS RANGE	VIKING	VGR5366B			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-10	33"x27"x72" RESIDENTIAL REFRIGERATOR	FRIGIDAIRE	FPRU19F8WF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-11	33"x27"x72" RESIDENTIAL FREEZER	FRIGIDAIRE	FPFU19F8WF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-12	24" DISHWASHER	VIKING	VDWU524SS			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-13	GAS GRILL	N/A	N/A		●		PLUMBING PRIME CONTRACTOR TO MAKE FINAL CONNECTION TO NATURAL GAS SUPPLY.
EQ-14	DOMESTIC WASHER MACHINE	WHIRLPOOL	WFW6620HW			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-15	MONORAIL CRANE	HARRINGTON	(N)ERM010L-L/S			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-16	ELEVATOR	THYSSENKRUPP ELEVATOR	ENDURA			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-17	12"X12"X78" SIX-TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	PROVIDED WITH 6" LEGS, LATCHES TO RECEIVE OWNER PROVIDED LOCKS. 1A PRIME CONTRACTOR TO INSTALL/PROVIDE
EQ-18	18"X18"X72" SINGLE TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-19	18"X18"X72" TWO TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-20	24" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-21	43" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-22	55" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-23	43" TELEVISION	LG	43UN6955ZUF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.
EQ-24	77" TELEVISION	LG	OLED77B1PUA			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.
EQ-25	AUTOMATIC ROLLER SHADE - DUAL	HUNTER DOUGLAS	RB 500			●	MOUNTED TO LINTEL, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-26	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO LINTEL, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-27	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO HORIZONTAL STOREFRONT MULLION @ 8'-0" A.F.F. PROVIDED W/ CLG TILE FLANGE. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-28	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO WALL @ STOREFRONT HEAD, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-29	MANUAL ROLLER SHADE - DUAL	HUNTER DOUGLAS	RB 500			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL. PROVIDED W/ FASCIA AND BLACKOUT CHANNEL. SHADE STYLE AND COLOR TO MATCH AUTOMATIC BLINDS.
EQ-30	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO HORIZONTAL STOREFRONT MULLION. SEE INTERIOR ELEVATIONS FOR LOCATION. ELECTRICAL PRIME TO PROVIDE/INSTALL
EQ-31	EXISTING EXTERIOR LIGHT TO BE RELOCATED	N/A	N/A		●		ELECTRICAL PRIME CONTRACTOR SHALL REMOVE LIGHT FROM EXISTING 1155N 9TH STREET FIRE STATION AND RELOCATE TO APP BAY INTERIOR @ 8'-0" A.F.F.
EQ-32	EXISTING STAINED GLASS WINDOW TO BE RELOCATED	N/A	N/A		●		1A PRIME CONTRACTOR SHALL REMOVE STAIN GLASS WINDOW FROM EXISTING 1155N 9TH STREET STATION AND RELOCATE IN LOBBY OF PROJECT. 1A PRIME CONTRACTOR RESPONSIBLE FOR INFILLING FORMER OPENING @ EXISTING 1155N 9TH STREET FIRE STATION W/ TEMPORARY WEATHER BARRIER & PLYWOOD SHEATHING.
EQ-33	EXISTING MEMORIAL PLAQUE SHELF TO BE RELOCATED	N/A	N/A		●		1A PRIME CONTRACTOR TO INSTALL EXISTING MEMORIAL PLAQUE SHELF. FINAL LOCATION AND MOUNTING TO BE APPROVED BY OWNER PRIOR TO INSTALLATION.
EQ-34	55" TELEVISION	LG	55UN6955ZUF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.

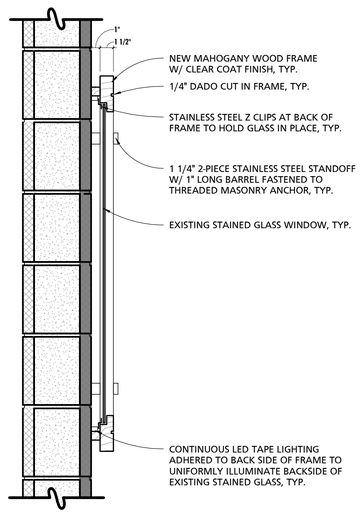
GENERAL FFE NOTES

NOTE #	NOTE
1	1A PRIME CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING FOR ALL WALL MOUNTED EQUIPMENT & DEVICES.



2 EQ-32 - EXISTING STAINED GLASS WINDOW ELEVATION

1 1/2" = 1'-0"



3 EQ-32 - EXISTING STAINED GLASS WINDOW SECTION

1 1/2" = 1'-0"

EXTERIOR LOCATION

ATTIC ACCESS TO BACK SIDE OF UNIT

EQ-32 - EXISTING CONDITIONS/LOCATION PICTURES

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

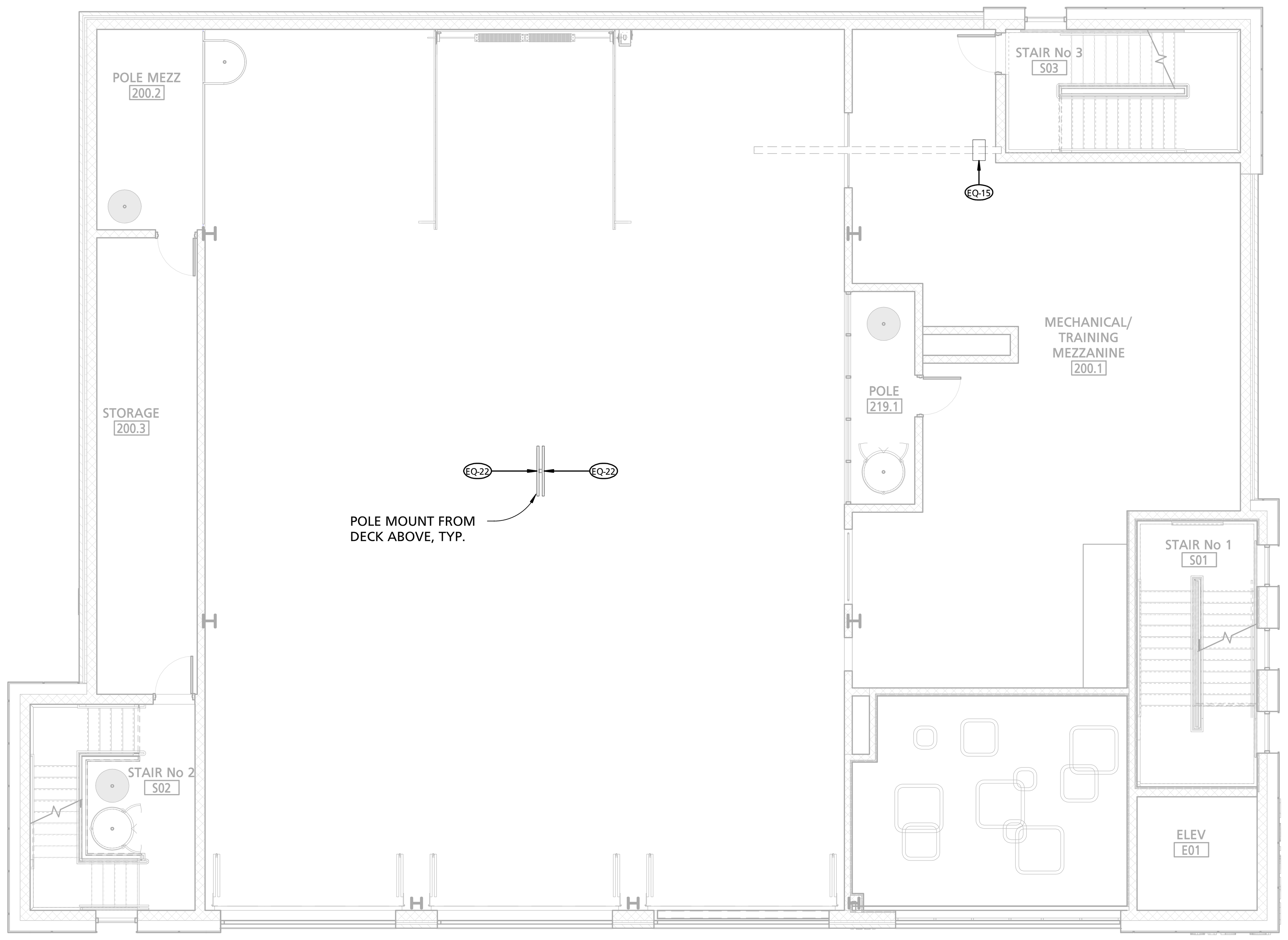
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

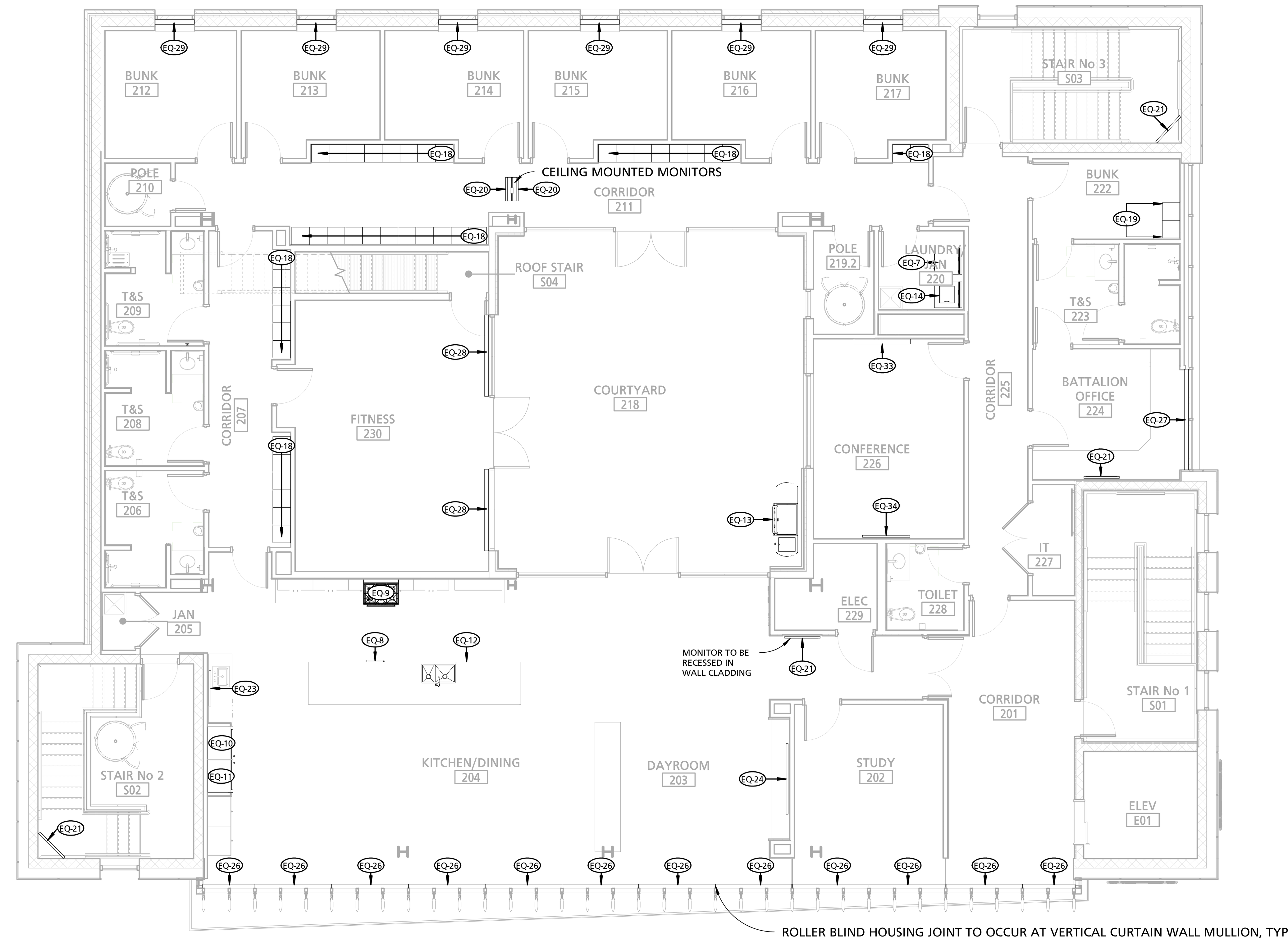
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FFE FIRST FLOOR PLAN, SCHEDULE & DETAILS
SHEET NUMBER: A114

7/20/2021 11:41:28 AM



① MEZZANINE LEVEL FFE
1/8" = 1'-0"



② SECOND FLOOR FFE
1/8" = 1'-0"

SCHEDULE - EQUIPMENT

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	OWNER FURNISH AND INSTALL	OWNER FURNISH CONTRACTOR INSTALL	CONTRACTOR FURNISH AND INSTALL	COMMENTS
EQ-1	STANDARD LOCKERS - WALL MOUNT - 20x20x72	GEARGRID CORPORATION	STANDARD FIRE STATION WALL MOUNT LOCKERS			●	1A PRIME CONTRACTOR TO PROVIDE W/ HANGER ROD, LOCKER DOOR W/ LOCKING CLASP & EXTRA ADJUSTABLE SHELF
EQ-2	EXISTING 6 SET SCARECROW DRYER	RAM AIR	120		●		1A PRIME CONTRACTOR TO RELOCATE FROM BASEMENT OF 1155N 9TH STREET FIREHOUSE
EQ-3	3 COMPARTMENT SINK W/ SIDEBOARDS	EAGLE GROUP	312-12-3-12			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-4	EXISTING COMMERCIAL EXTRACTOR	MILNOR	MWT27X5		●		PLUMBING PRIME CONTRACTOR TO RELOCATE FROM BASEMENT OF 1155N 9TH STREET FIREHOUSE
EQ-5	SCBA COMPRESSOR	ARCTIC	E4-10-A6			●	MECHANICAL PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-6	DOMESTIC STACKED WASHER DRYER MACHINE	CONTINENTAL GIRBAU	JSGSX			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-7	DOMESTIC DRYER MACHINE	WHIRLPOOL	WED5620HW			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-8	BUILT-IN CONVECTION OVEN / MICROWAVE	VIKING	VMDD5306SS			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-9	6 BURNER GAS RANGE	VIKING	VGR5366B			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-10	33"x27"x72" RESIDENTIAL REFRIGERATOR	FRIGIDAIRE	FPRU19F8WF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-11	33"x27"x72" RESIDENTIAL FREEZER	FRIGIDAIRE	FPFU19F8WF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-12	24" DISHWASHER	VIKING	VDWU524SS			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-13	GAS GRILL	N/A	N/A		●		PLUMBING PRIME CONTRACTOR TO MAKE FINAL CONNECTION TO NATURAL GAS SUPPLY.
EQ-14	DOMESTIC WASHER MACHINE	WHIRLPOOL	WFW6620HW			●	PLUMBING PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-15	MONORAIL CRANE	HARRINGTON	(N)ERM010L-L/S			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-16	ELEVATOR	THYSSENKRUPP ELEVATOR	ENDURA			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-17	12"X12"X78" SIX-TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	PROVIDED WITH 6" LEGS, LATCHES TO RECEIVE OWNER PROVIDED LOCKS. 1A PRIME CONTRACTOR TO INSTALL/PROVIDE
EQ-18	18"X18"X72" SINGLE TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-19	18"X18"X72" TWO TIER METAL LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL SERIES			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL
EQ-20	24" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-21	43" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-22	55" MONITOR - ALERTING	N/A	N/A			●	PART OF CAD ALERTING SYSTEM. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-23	43" TELEVISION	LG	43UN6955ZUF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.
EQ-24	77" TELEVISION	LG	OLED77B1PUA			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.
EQ-25	AUTOMATIC ROLLER SHADE - DUAL	HUNTER DOUGLAS	RB 500			●	MOUNTED TO LINTEL, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-26	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO LINTEL, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-27	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO HORIZONTAL STOREFRONT MULLION @ 8'-0" A.F.F. PROVIDED W/ CLG TILE FLANGE. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-28	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO WALL @ STOREFRONT HEAD, PROVIDED W/ FASCIA. ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL.
EQ-29	MANUAL ROLLER SHADE - DUAL	HUNTER DOUGLAS	RB 500			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL. PROVIDED W/ FASCIA AND BLACKOUT CHANNEL. SHADE STYLE AND COLOR TO MATCH AUTOMATIC BLINDS.
EQ-30	AUTOMATIC ROLLER SHADE - SINGLE	HUNTER DOUGLAS	RB 500			●	MOUNTED TO HORIZONTAL STOREFRONT MULLION. SEE INTERIOR ELEVATIONS FOR LOCATION. ELECTRICAL PRIME TO PROVIDE/INSTALL
EQ-31	EXISTING EXTERIOR LIGHT TO BE RELOCATED	N/A	N/A		●		ELECTRICAL PRIME CONTRACTOR SHALL REMOVE LIGHT FROM EXISTING 1155N 9TH STREET FIRE STATION AND RELOCATE TO APP BAY INTERIOR @ 8'-0" A.F.F.
EQ-32	EXISTING STAINED GLASS WINDOW TO BE RELOCATED	N/A	N/A		●		1A PRIME CONTRACTOR SHALL REMOVE STAIN GLASS WINDOW FROM EXISTING 1155N 9TH STREET STATION AND RELOCATE IN LOBBY OF PROJECT. 1A PRIME CONTRACTOR RESPONSIBLE FOR INFILLING FORMER OPENING @ EXISTING 1155N 9TH STREET FIRE STATION W/ TEMPORARY WEATHER BARRIER & PLYWOOD SHEATHING.
EQ-33	EXISTING MEMORIAL PLAQUE SHELF TO BE RELOCATED	N/A	N/A		●		1A PRIME CONTRACTOR TO INSTALL EXISTING MEMORIAL PLAQUE SHELF. FINAL LOCATION AND MOUNTING TO BE APPROVED BY OWNER PRIOR TO INSTALLATION.
EQ-34	55" TELEVISION	LG	55UN6955ZUF			●	1A PRIME CONTRACTOR TO PROVIDE/INSTALL W/ WALL MOUNTING ARM.

GENERAL FFE NOTES

NOTE #	NOTE
1	1A PRIME CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING FOR ALL WALL MOUNTED EQUIPMENT & DEVICES.

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SEAL: REGISTERED ARCHITECT PENNSYLVANIA DAVID A. WOODWARD RA405311

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

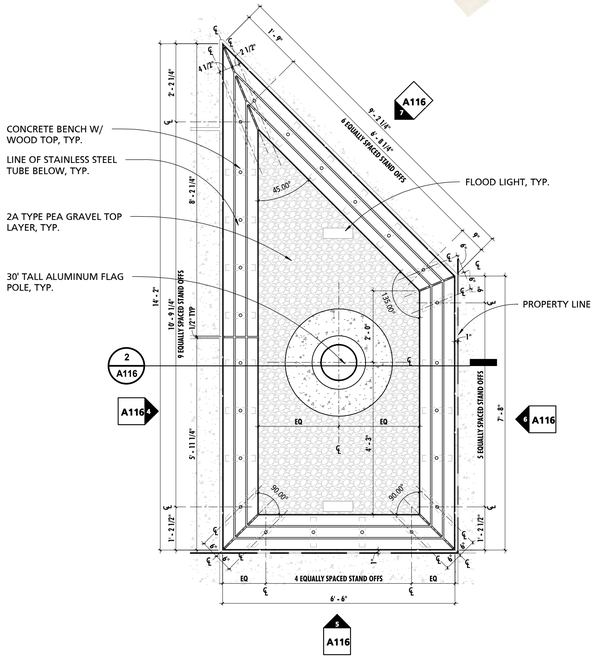
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

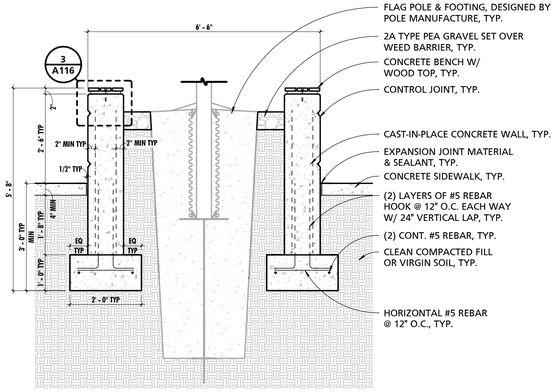
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FFE MEZZANINE & SECOND FLOOR
SHEET NUMBER: A115

7/20/2021 11:41:36 AM

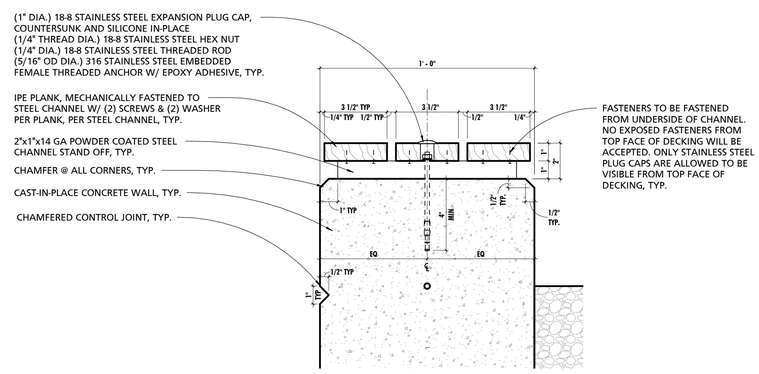
PLANTER BASIN & BENCH ISOMETRIC



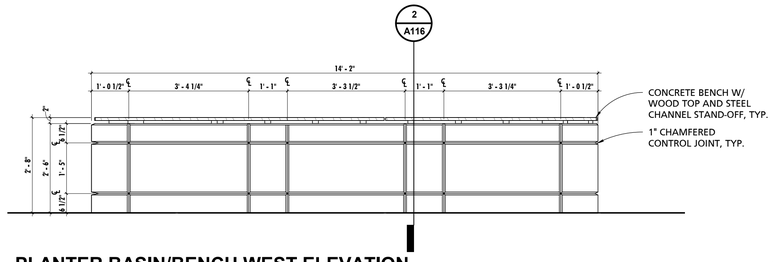
1 PLANTER BASIN & FLAG POLE PLAN
1/2" = 1'-0"



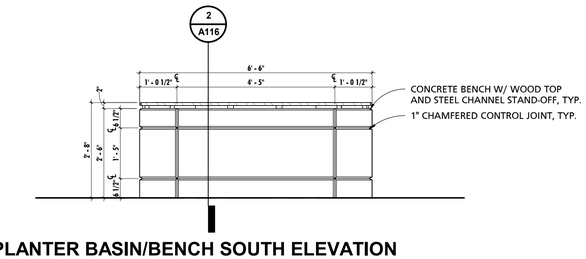
2 PLANTER BASIN & FLAG POLE SECTION DETAL
1/2" = 1'-0"



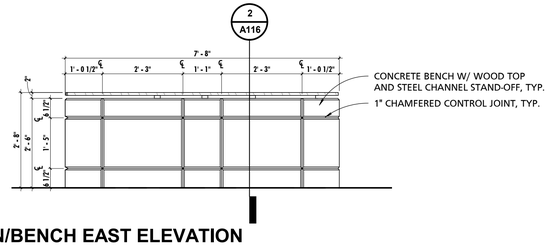
3 TYPICAL BENCH STANDOFF DETAIL
3" = 1'-0"



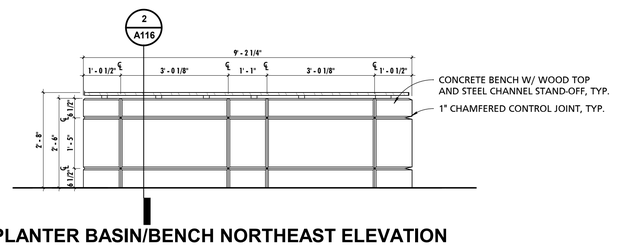
4 PLANTER BASIN/BENCH WEST ELEVATION
1/2" = 1'-0"



5 PLANTER BASIN/BENCH SOUTH ELEVATION
1/2" = 1'-0"



6 PLANTER BASIN/BENCH EAST ELEVATION
1/2" = 1'-0"



7 PLANTER BASIN/BENCH NORTHEAST ELEVATION
1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

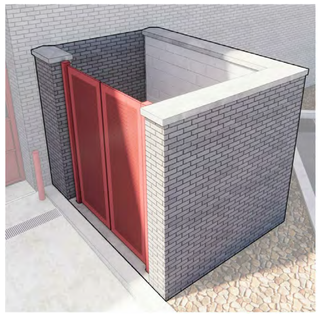
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

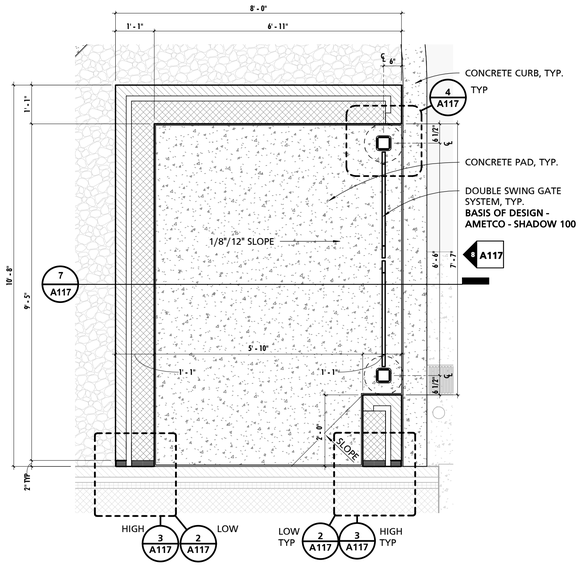
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SITE DETAILS
SHEET NUMBER: A116

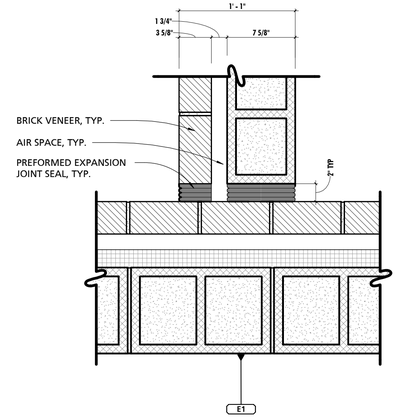
7/20/2021 11:41:40 AM



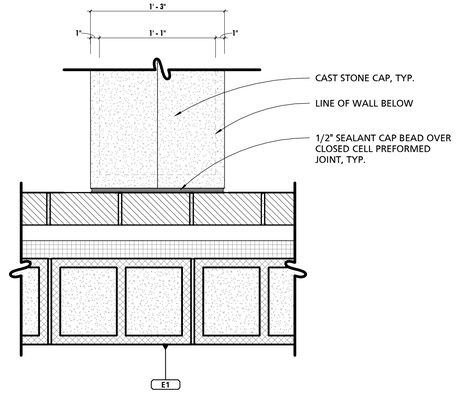
GARBAGE ENCLOSURE ISOMETERIC



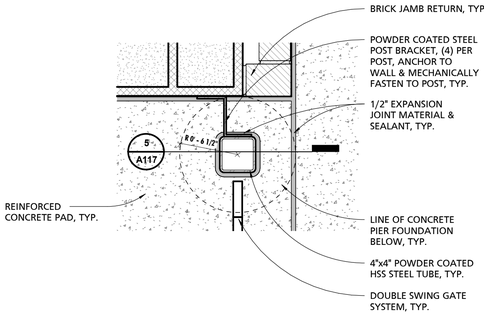
1 GARBAGE ENCLOSURE ENLARGED PLAN
1/2" = 1'-0"



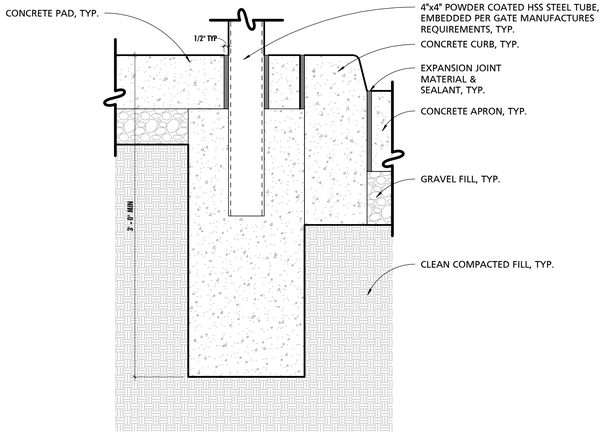
2 WALL TERMINATION DETAIL - LOW
1 1/2" = 1'-0"

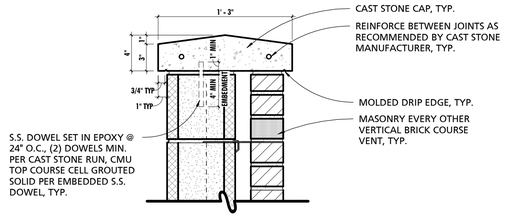


3 WALL TERMINATION DETAIL - HIGH
1 1/2" = 1'-0"



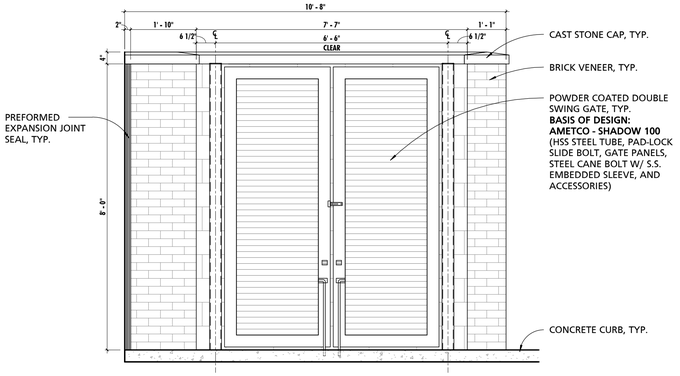
4 ENLARGED GATE POST PLAN
1 1/2" = 1'-0"



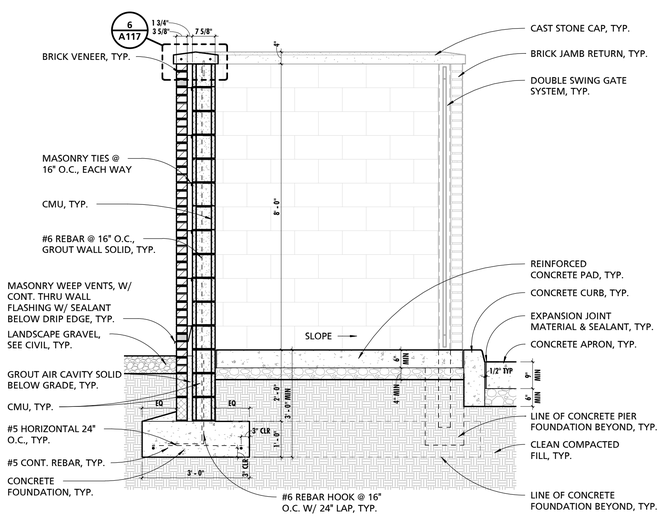


5 TYPICAL CONCRETE PIER SECTION
1 1/2" = 1'-0"

6 CAST STONE CAP DETAIL
1 1/2" = 1'-0"



8 ENCLOSURE ELEVATION - NORTH
1/2" = 1'-0"



7 TYPICAL ENCLOSURE WALL SECTION
1/2" = 1'-0"

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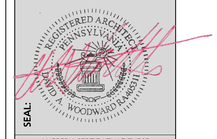

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

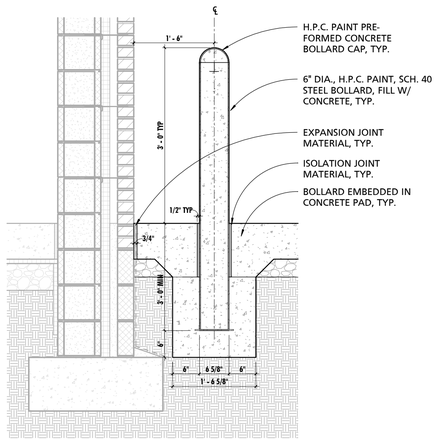
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

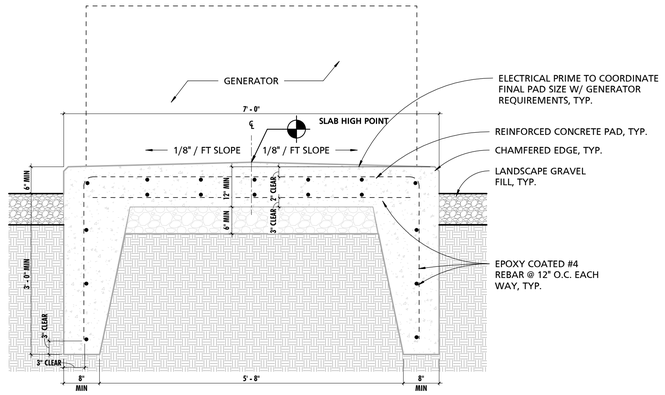
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SITE DETAILS
SHEET NUMBER: A117

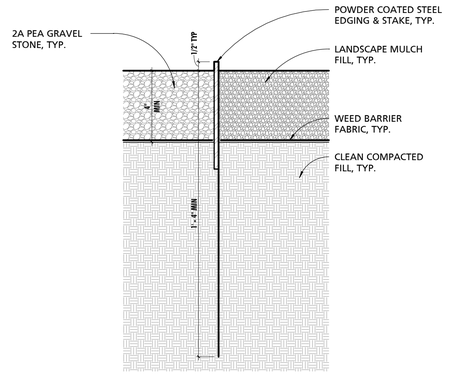
7/20/2021 11:41:45 AM



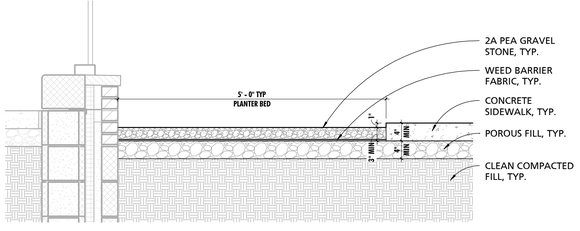
1 TYPICAL EXTERIOR BOLLARD DETAIL
3/4" = 1'-0"



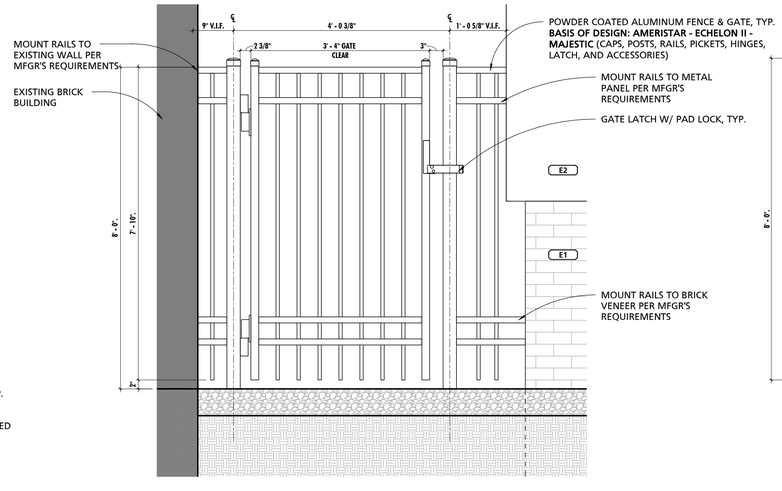
2 GENERATOR PAD SECTION
3/4" = 1'-0"



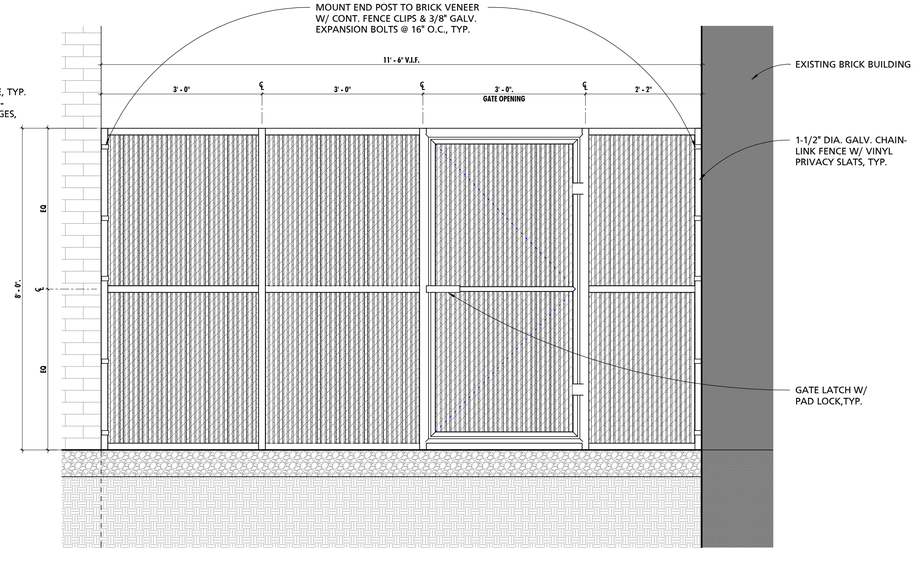
3 TYPICAL LAWN TRANSITION DETAIL
3" = 1'-0"



4 TYPICAL PLANTER BED
3/4" = 1'-0"



5 FRONT GATE
3/4" = 1'-0"



6 REAR CHAINLINK FENCE
3/4" = 1'-0"

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EXPIRATION DATE: 6-30-2023

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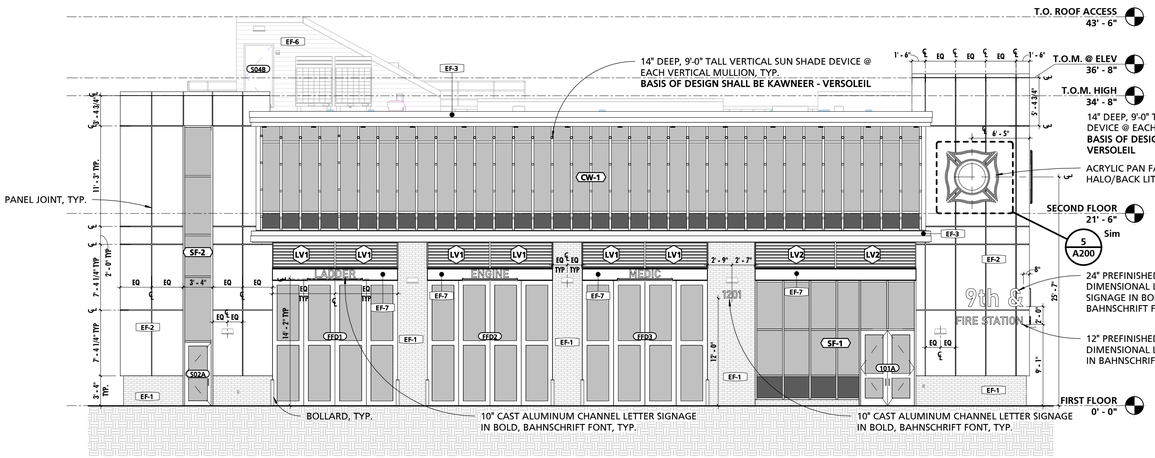
1201 N 9TH STREET, CITY OF READING, PA 19604

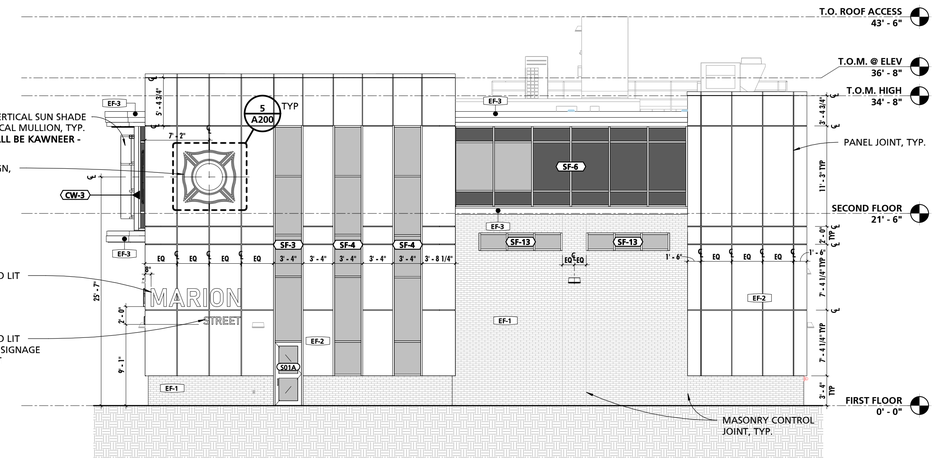
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SITE DETAILS
SHEET NUMBER: A118

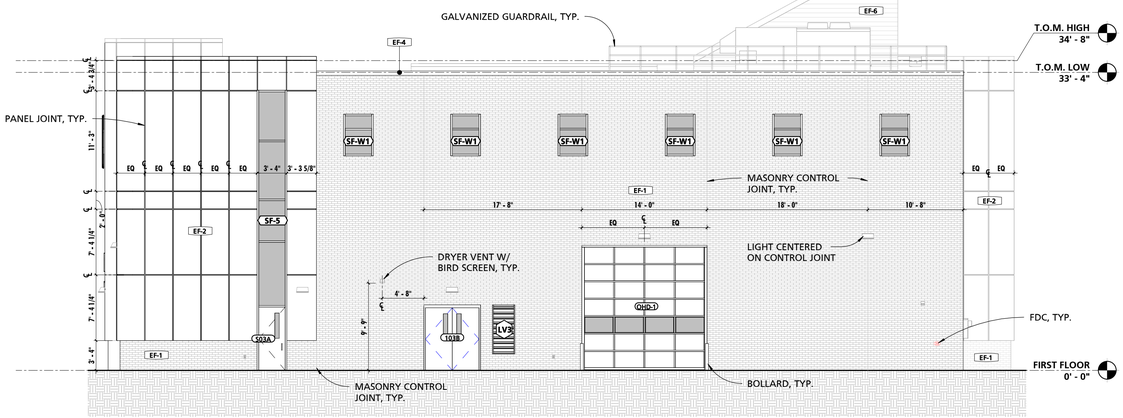
7/20/2021 11:41:48 AM



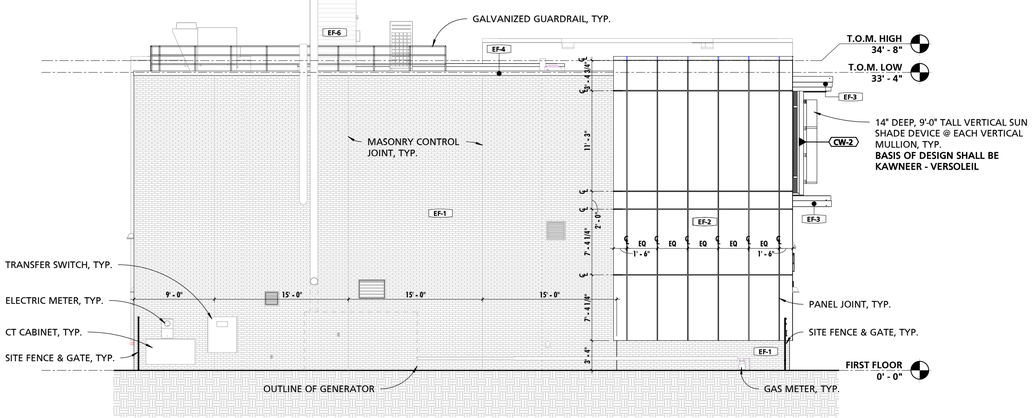
1 PROJECT SOUTH ELEVATION
1/8" = 1'-0"



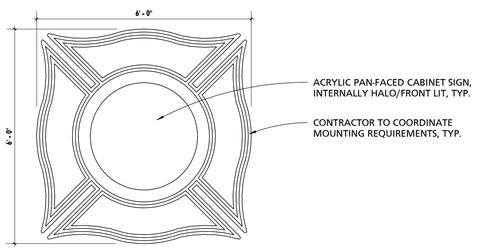
2 PROJECT EAST ELEVATION
1/8" = 1'-0"



3 PROJECT NORTH ELEVATION
1/8" = 1'-0"



4 PROJECT WEST ELEVATION
1/8" = 1'-0"



5 EXTERIOR SIGNAGE ELEVATION
1/2" = 1'-0"

NOTE: FIRE DEPARTMENT TO PROVIDE 1A PRIME CONTRACTOR W/ FINAL SIGN DESIGN GRAPHICS PRIOR TO SIGN FABRICATION.

SCHEDULE - EXTERIOR FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
EF-1	STANDARD BRICK VENEER	GLEN GERY	SIOUX CITY - EBONITE VELOUR	
EF-2	COMPOSITE METAL WALL PANEL	PAC-CLAD	PAC-3000 RS - DEEP BLACK	
EF-3	PREFINISHED METAL FASCIA		ANODIZED ALUM	
EF-4	PREFINISHED METAL COPING	PAC-CLAD	DEEP BLACK	MATCH METAL PANEL COLOR
EF-6	HORIZONTAL FIBER CEMENT SIDING	NICHIHA	VINTAGEWOOD - CEDAR	
EF-7	PAINTED STEEL LINTEL			EXPOSED STEEL PAINTED IN H.P.C.

GENERAL ELEVATION NOTES

NOTE #	NOTE
1	ALL MEP EQUIPMENT IS SHOWN FOR REFERENCE ONLY.
2	ORIENTATION OF ELEVATIONS ARE IDENTIFIED BASED ON PROJECT NORTH.
3	OUTSIDE CORNERS OF COMPOSITE METAL PANEL TO BE ONE CONTINUOUSLY PRE-FORMED PIECE, TERMINATING AT INDICATED CONTROL JOINTS.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

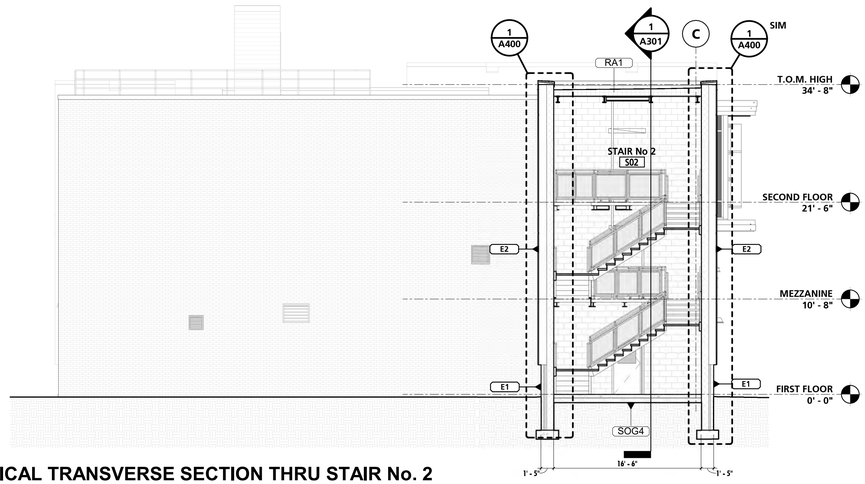
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

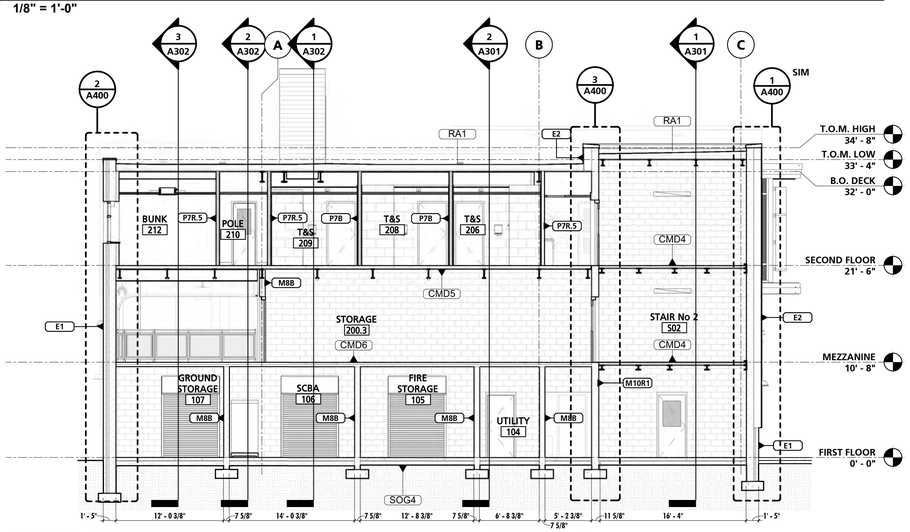
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: BUILDING ELEVATIONS
SHEET NUMBER: A200

7/20/2021 11:41:59 AM



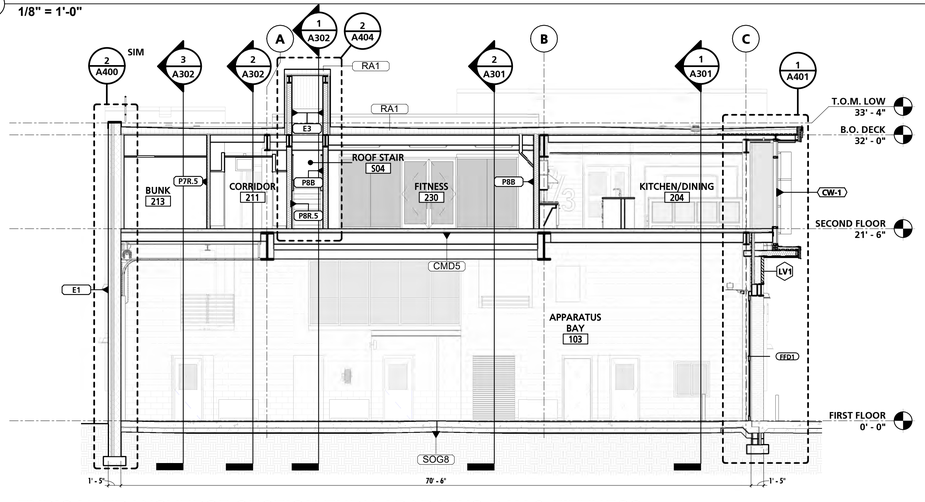
1 TYPICAL TRANSVERSE SECTION THRU STAIR No. 2

1/8" = 1'-0"



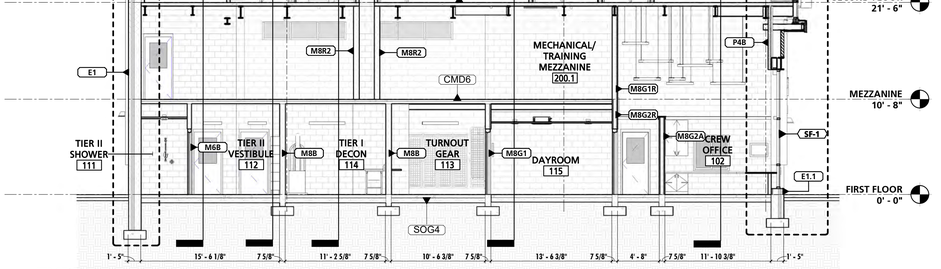
2 TYPICAL TRANSVERSE SECTION THRU STORAGE & STAIR No.2

1/8" = 1'-0"



3 TYPICAL TRANSVERSE SECTION THRU APARATUS BAY & FITTNESS

1/8" = 1'-0"

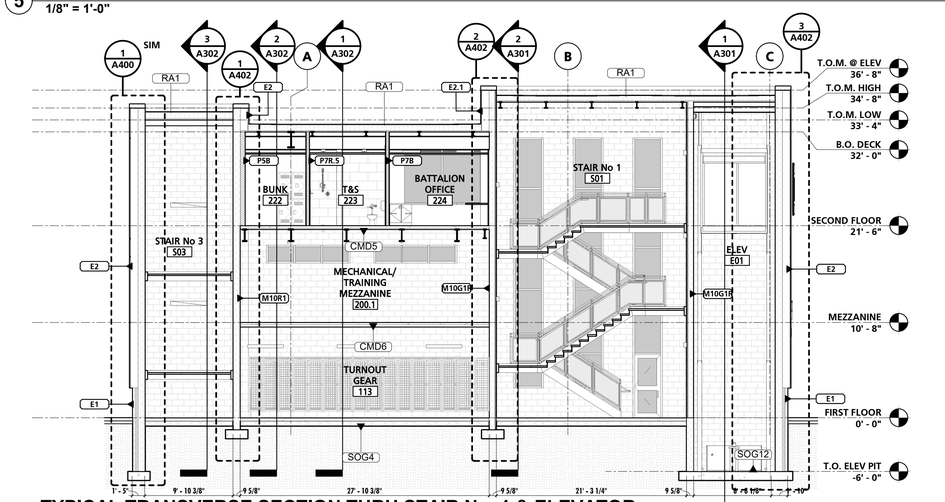


5 TYPICAL TRANSVERSE SECTION THRU MECHANICAL MEZZANINE & CREW OFFICE

1/8" = 1'-0"

4 TYPICAL TRANSVERSE SECTION THRU COURTYARD

1/8" = 1'-0"



6 TYPICAL TRANSVERSE SECTION THRU STAIR No. 1 & ELEVATOR

1/8" = 1'-0"

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REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

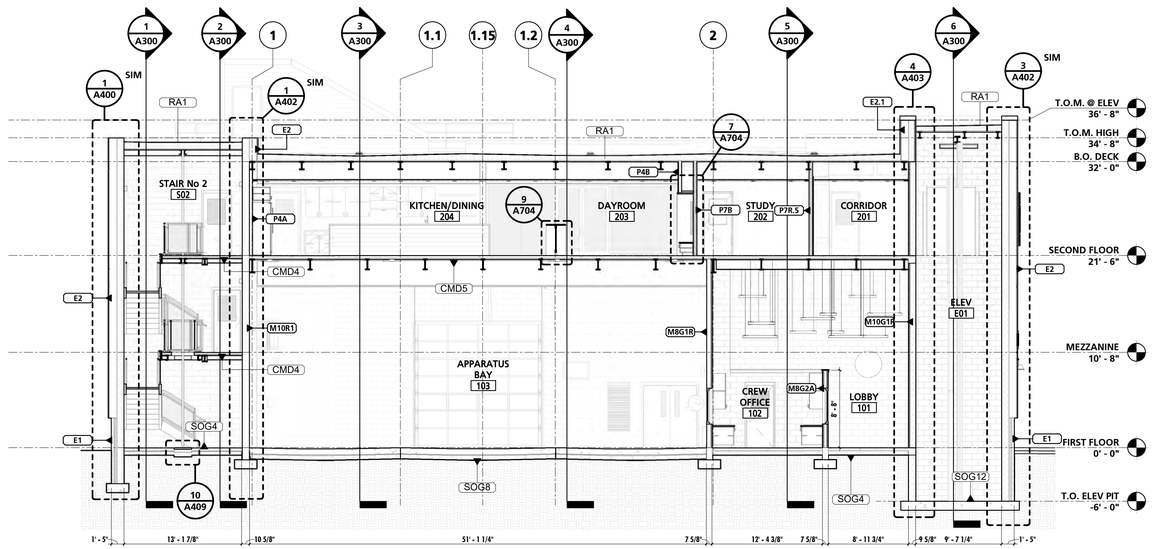
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 08/13/2021

DRAWING TITLE: BUILDING SECTIONS

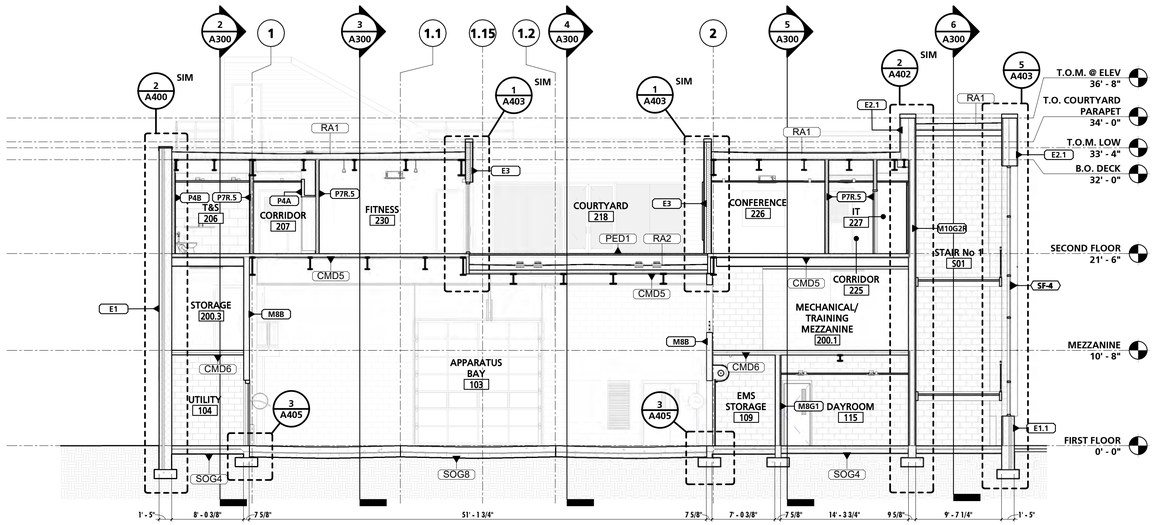
SHEET NUMBER: A300

7/20/2021 11:42:17 AM



1 TYPICAL LONGITUDINAL SECTION THRU CREW OFFICE

1/8" = 1'-0"



2 TYPICAL LONGITUDINAL SECTION THRU COURTYARD & DAYROOM

1/8" = 1'-0"

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EXPIRATION DATE: 6-30-2023

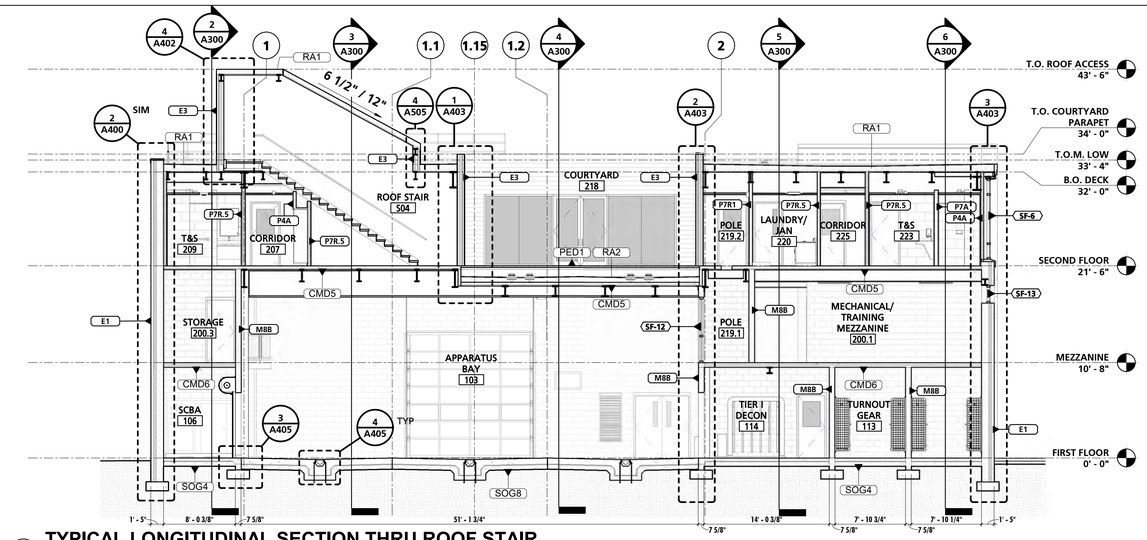
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

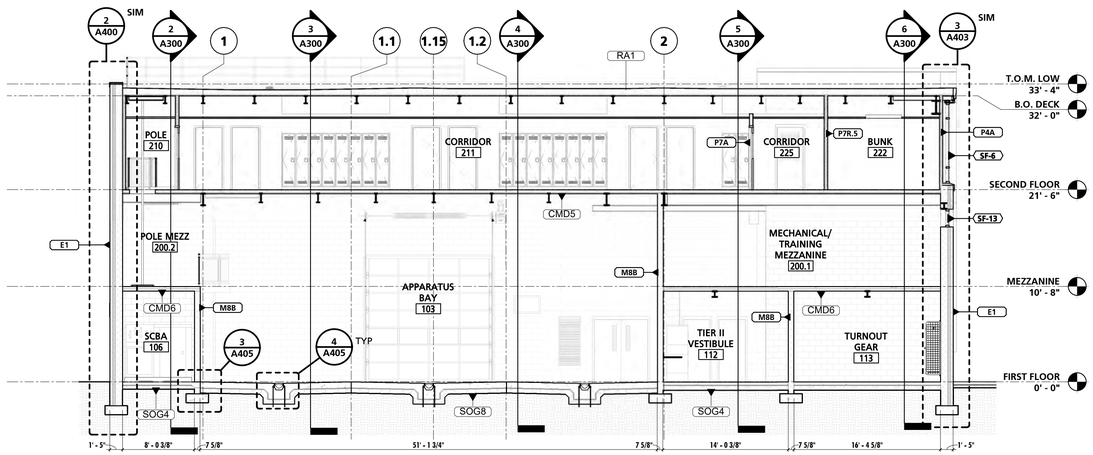
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: BUILDING SECTIONS
SHEET NUMBER: A301

7/20/2021 11:42:25 AM



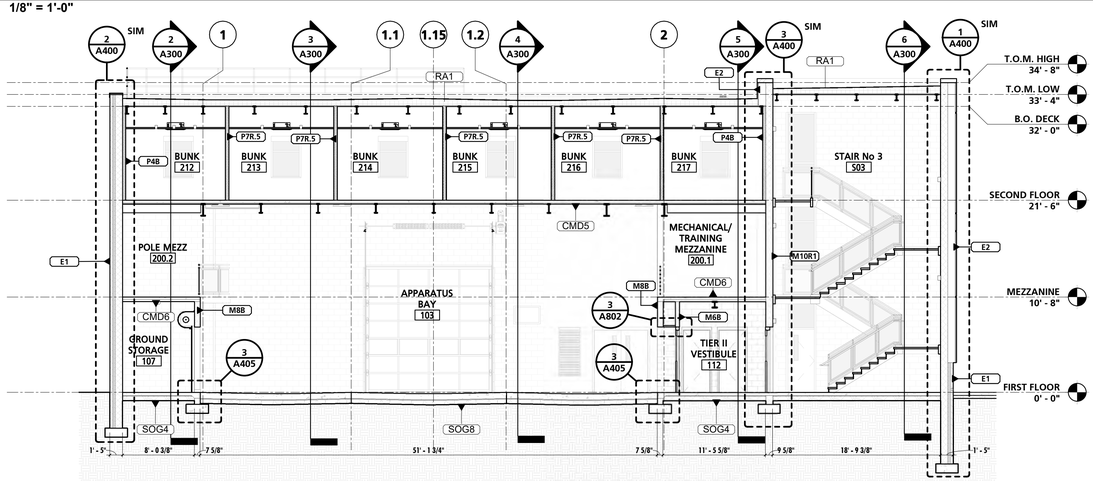
1 TYPICAL LONGITUDINAL SECTION THRU ROOF STAIR

1/8" = 1'-0"



2 TYPICAL LONGITUDINAL SECTION THRU DECON

1/8" = 1'-0"



3 TYPICAL LONGITUDINAL SECTION THRU STAIR No. 3

1/8" = 1'-0"

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EXPIRATION DATE: 6-30-2023

CONSULTANT:

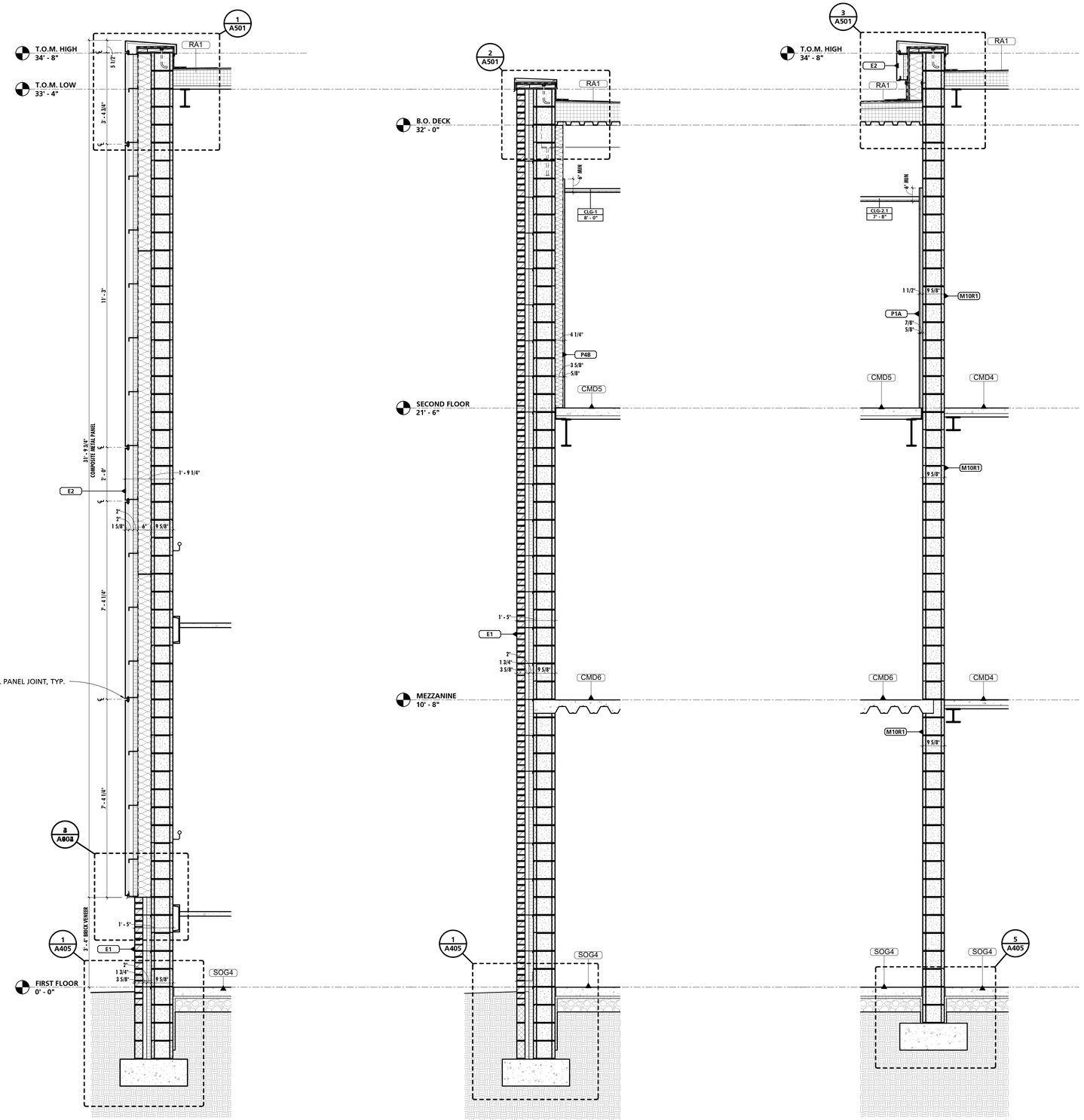
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: BUILDING SECTIONS
SHEET NUMBER: A302

7/20/2021 11:42:31 AM



1 TYPICAL WALL SECTION
1/2" = 1'-0"

2 TYPICAL WALL SECTION
1/2" = 1'-0"

3 TYPICAL WALL SECTION
1/2" = 1'-0"

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EXPIRATION DATE: 6-30-2023

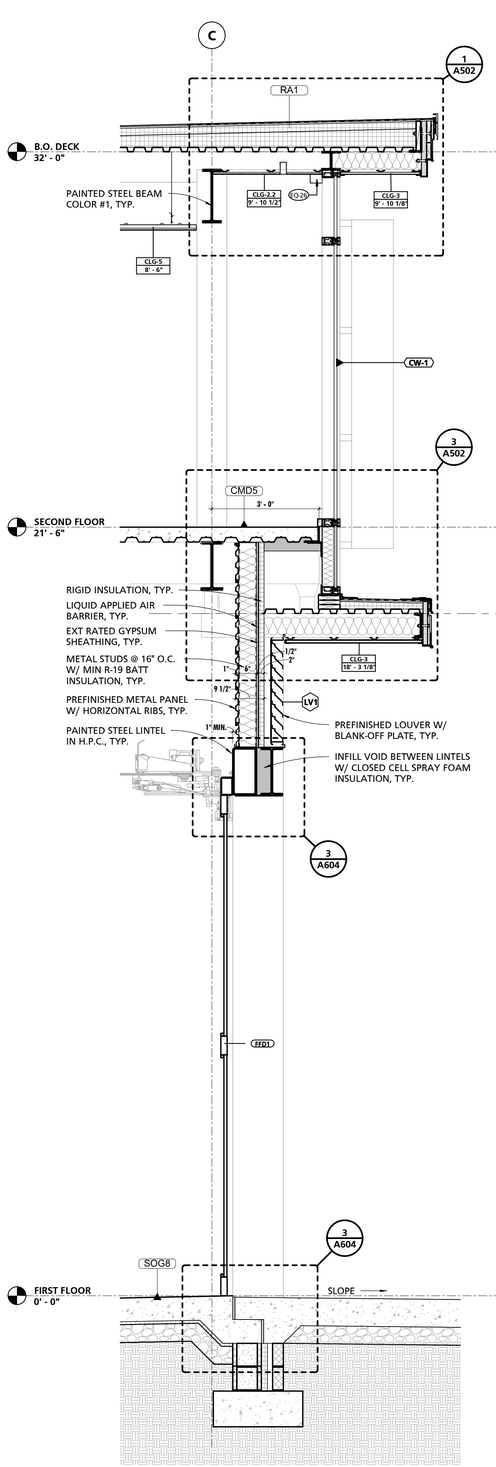
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

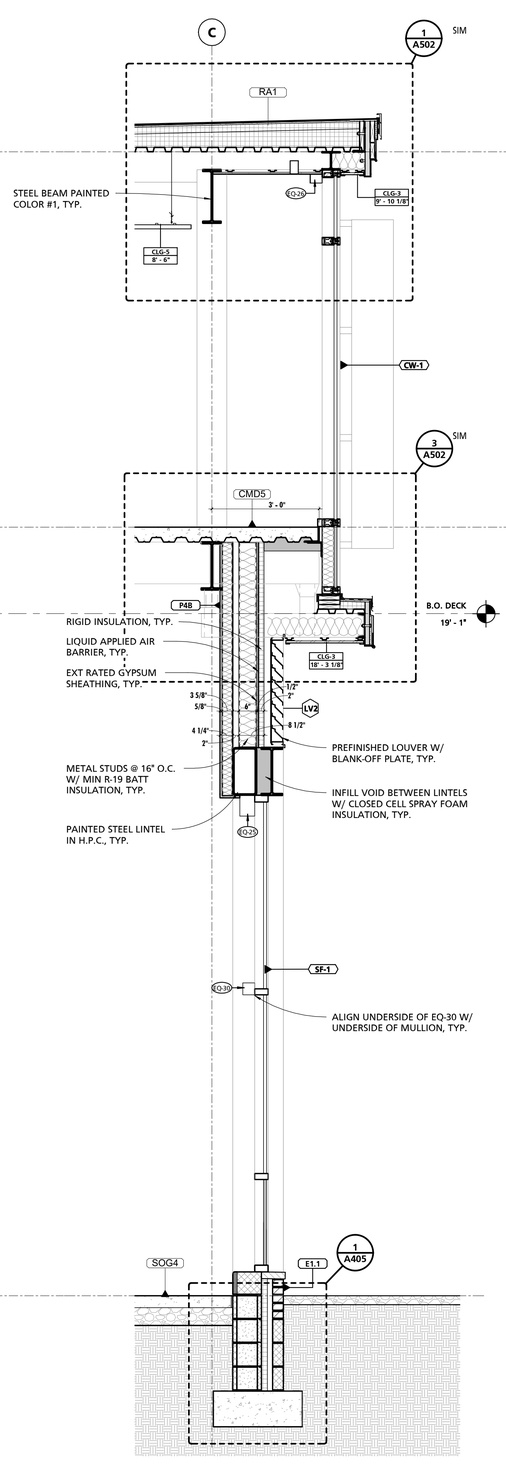
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: WALL SECTIONS
SHEET NUMBER: A400

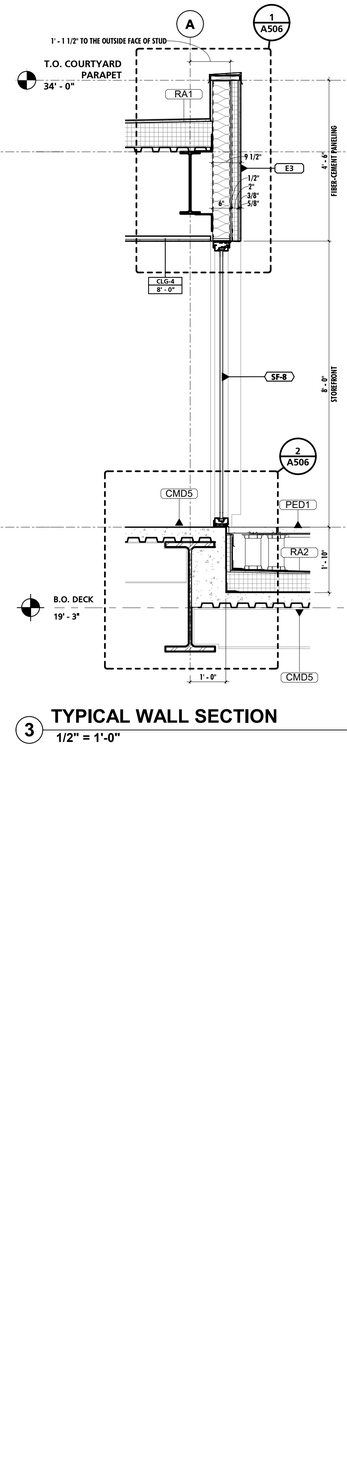
7/20/2021 11:42:34 AM



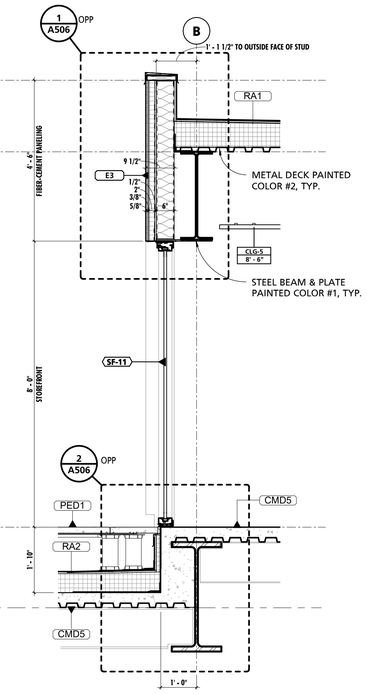
1 TYPICAL WALL SECTION
1/2" = 1'-0"



2 TYPICAL WALL SECTION
1/2" = 1'-0"



3 TYPICAL WALL SECTION
1/2" = 1'-0"



4 TYPICAL WALL SECTION
1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

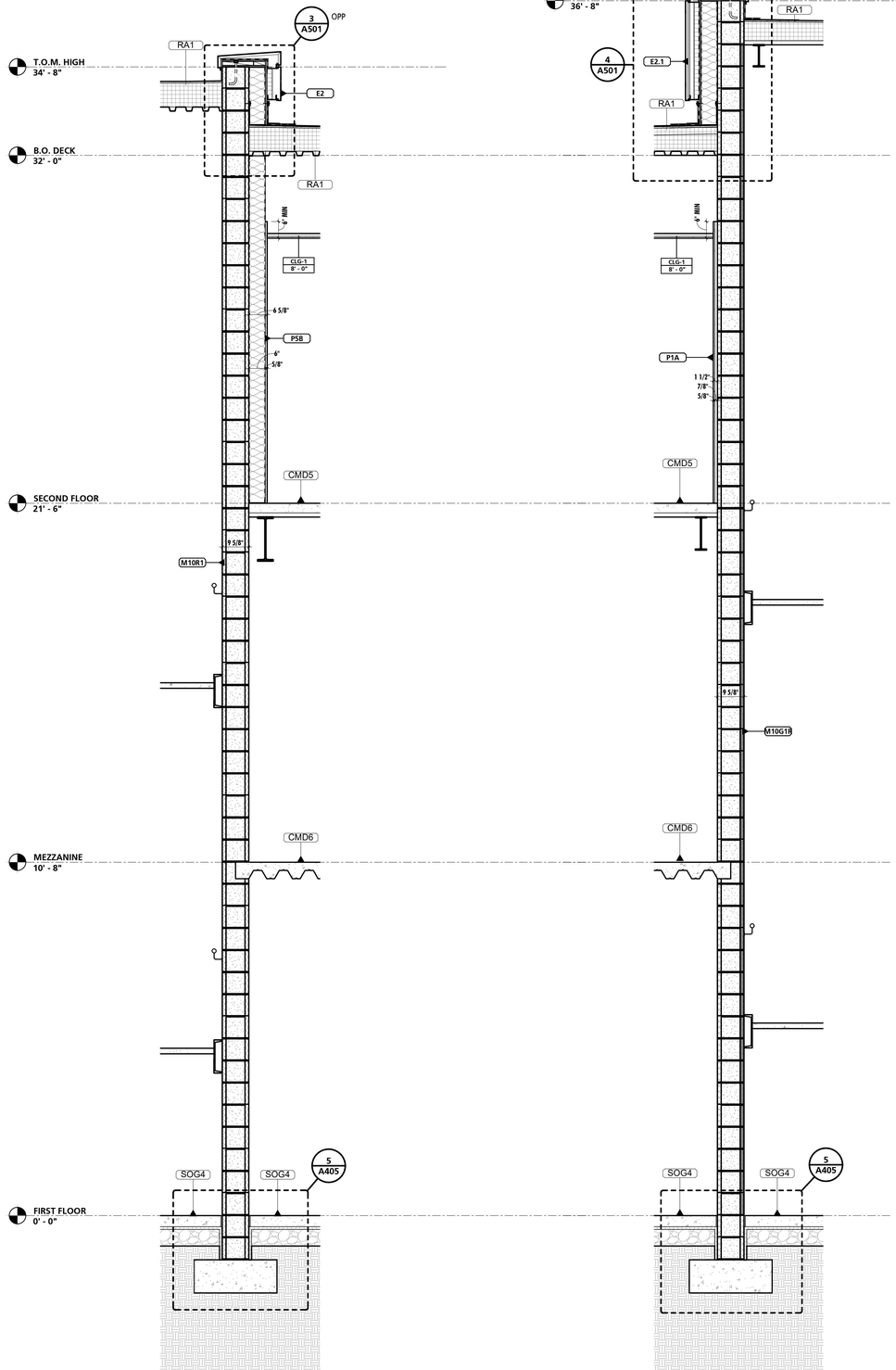
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

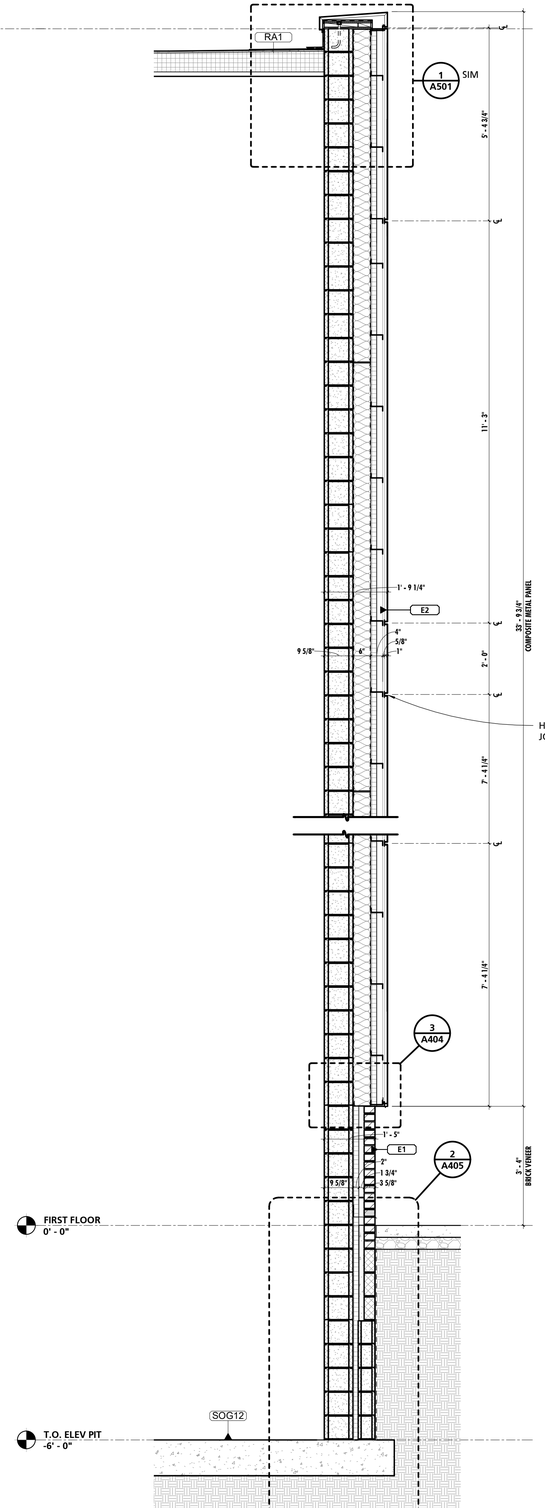
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: WALL SECTIONS
SHEET NUMBER: A401

7/20/2021 11:42:37 AM

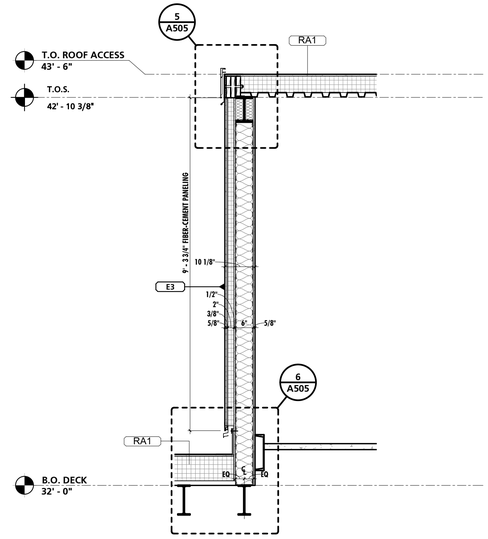


1 TYPICAL WALL SECTION
1/2" = 1'-0"

2 TYPICAL WALL SECTION
1/2" = 1'-0"



3 TYPICAL WALL SECTION
1/2" = 1'-0"



4 TYPICAL WALL SECTION
1/2" = 1'-0"

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EXPIRATION DATE: 6-30-2023

CONSULTANT:

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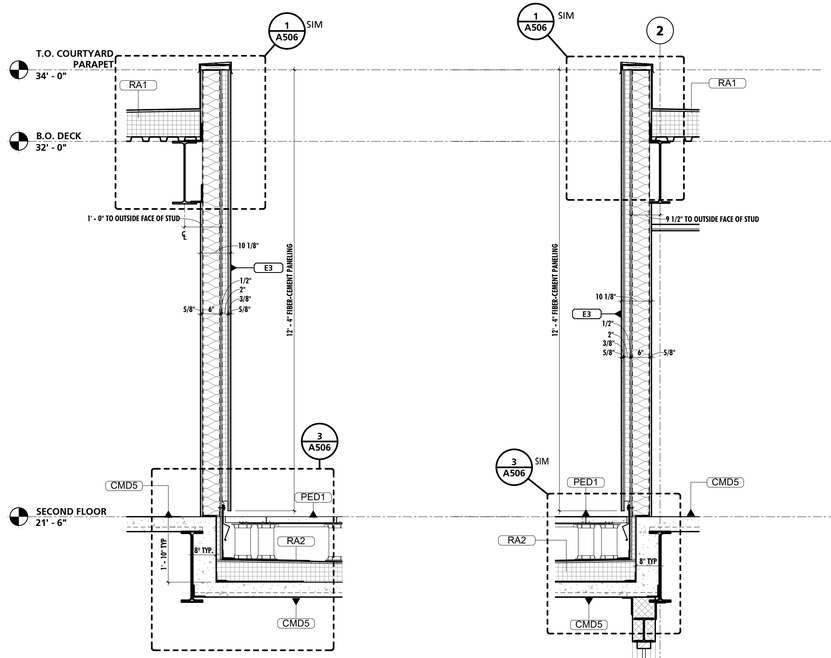
1201 N 9TH STREET, CITY OF READING, PA 19604

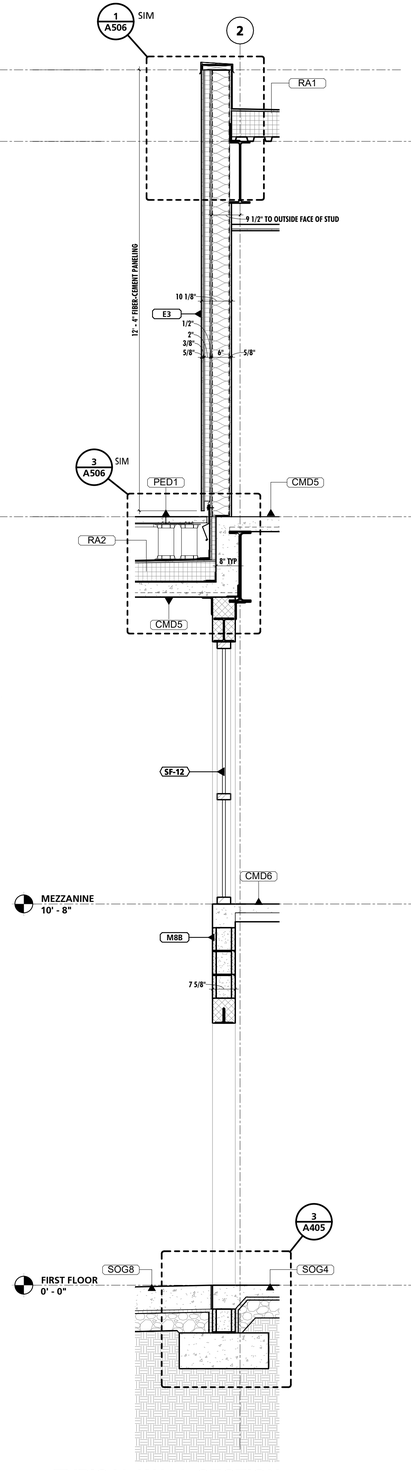
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: WALL SECTIONS
SHEET NUMBER: A402

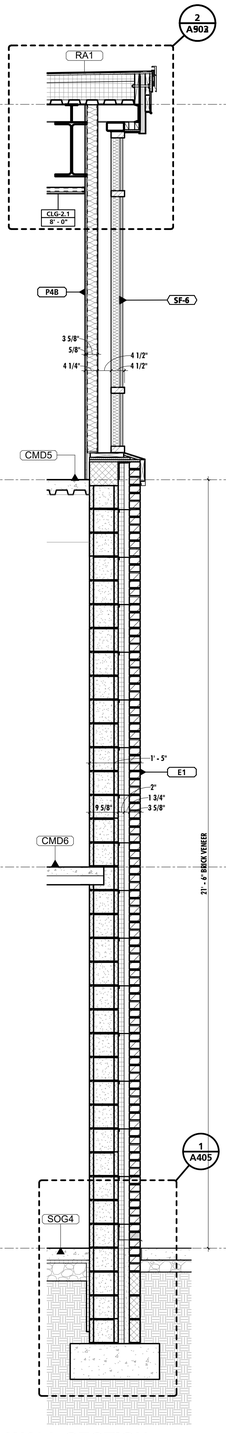
7/20/2021 11:42:41 AM



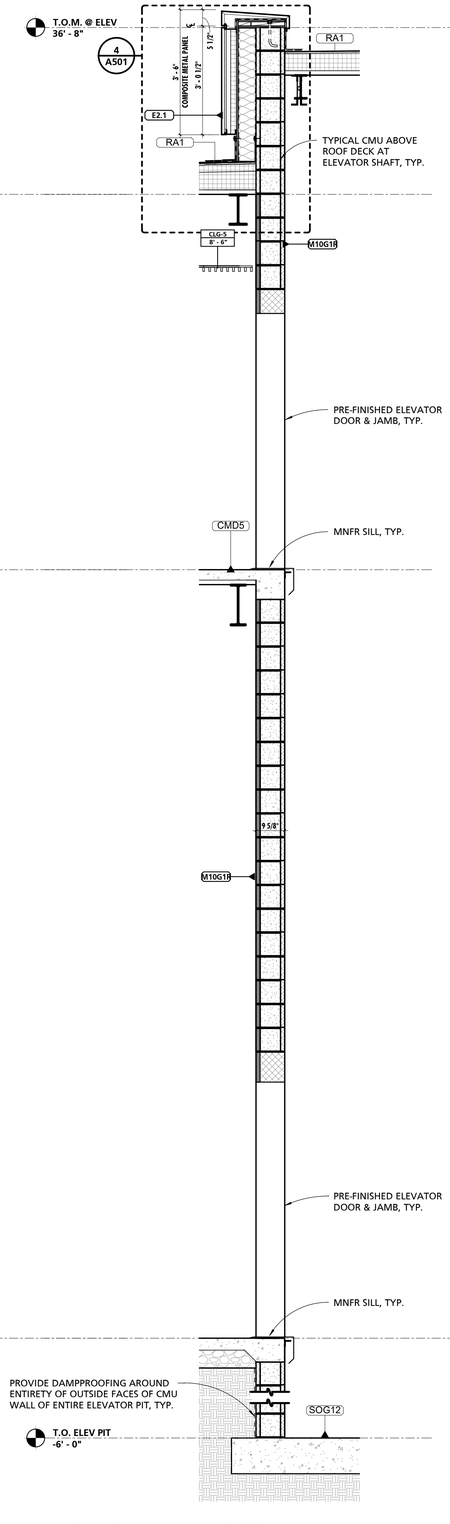
1 **TYPICAL WALL SECTION**
1/2" = 1'-0"



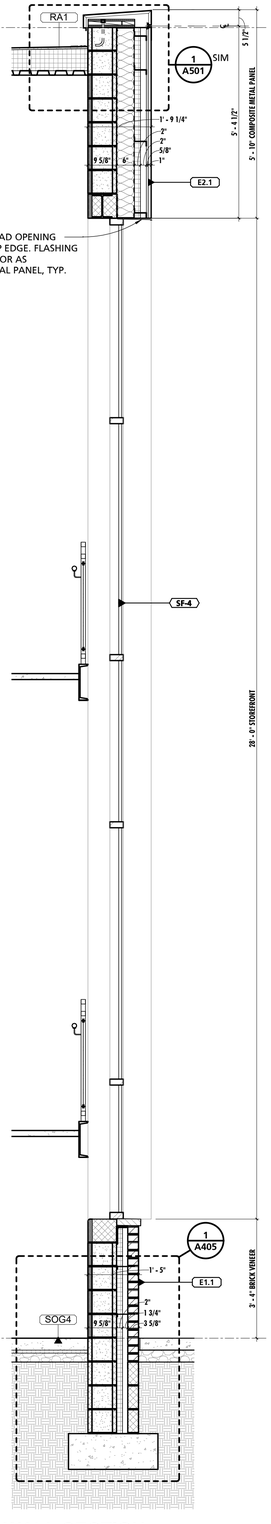
2 **TYPICAL WALL SECTION**
1/2" = 1'-0"



3 **TYPICAL WALL SECTION**
1/2" = 1'-0"



4 **TYPICAL WALL SECTION**
1/2" = 1'-0"



5 **TYPICAL WALL SECTION**
1/2" = 1'-0"

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EXPIRATION DATE: 6-30-2023

CONSULTANT:

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1201 N 9TH STREET, CITY OF READING, PA 19604

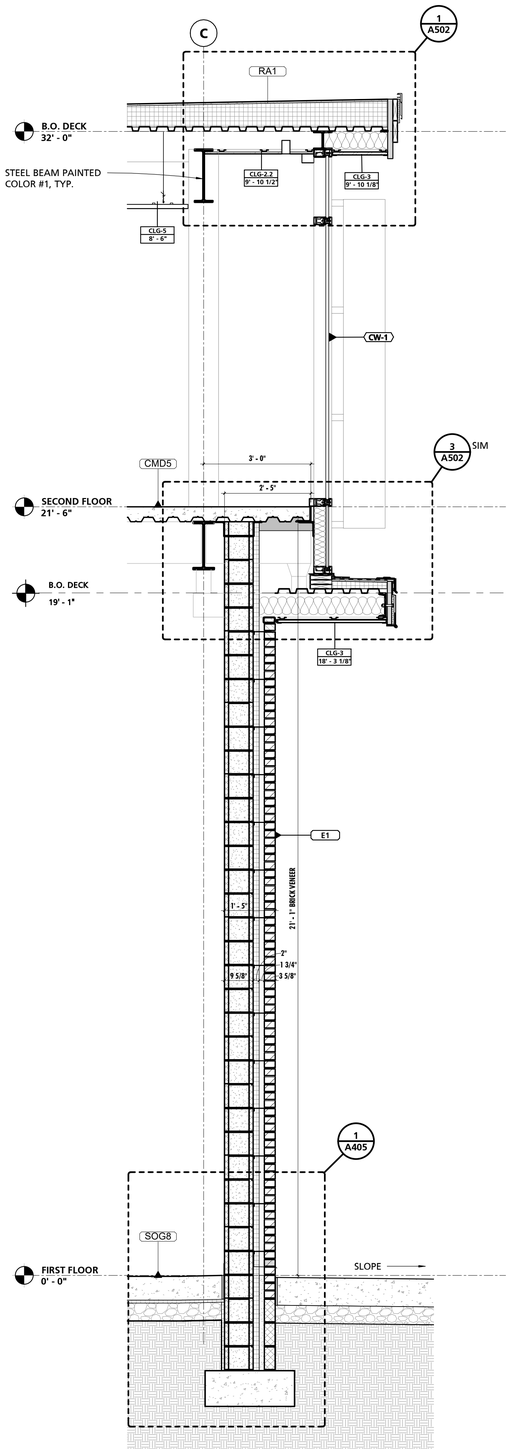
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

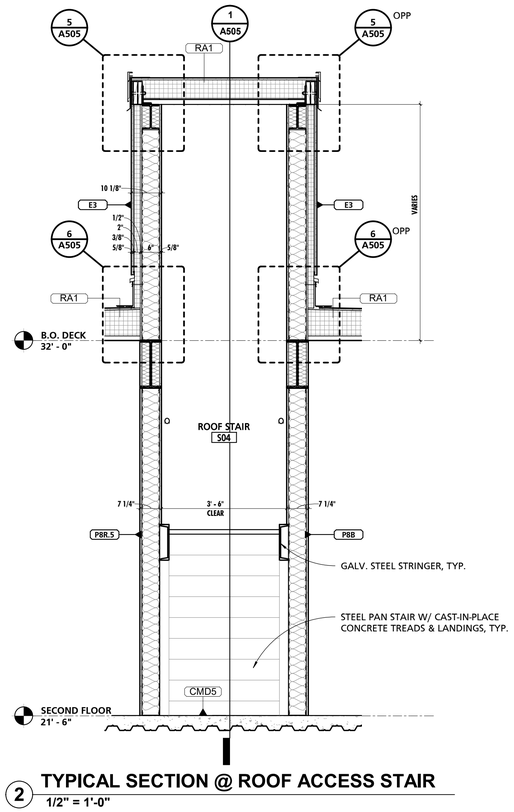
DRAWING TITLE: WALL SECTIONS

SHEET NUMBER: A403

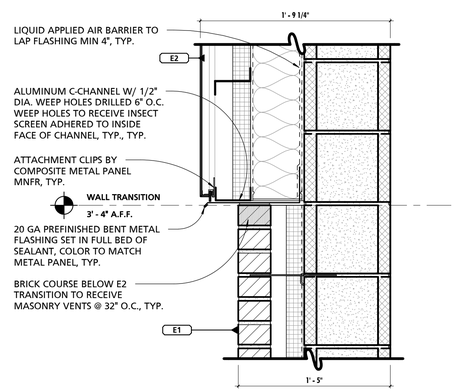
7/20/2021 11:42:44 AM



1 TYPICAL WALL SECTION
1/2" = 1'-0"



2 TYPICAL SECTION @ ROOF ACCESS STAIR
1/2" = 1'-0"



3 TYPICAL WALL TRANSITION DETAIL
1 1/2" = 1'-0"

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CONSULTANT:

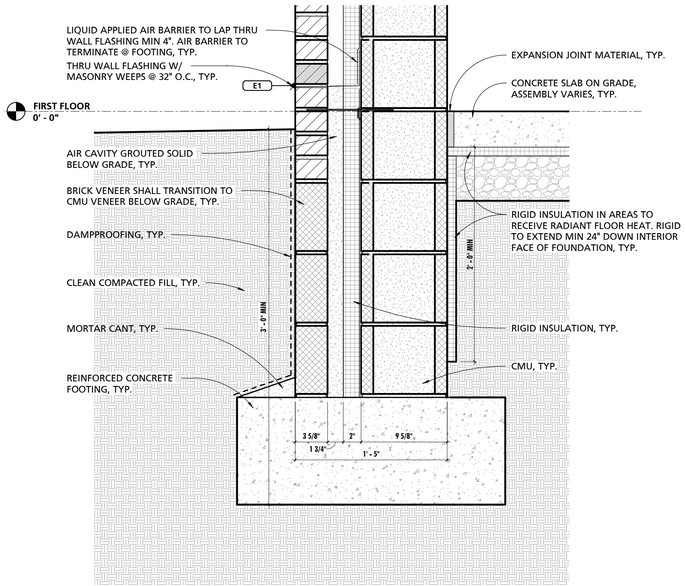
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

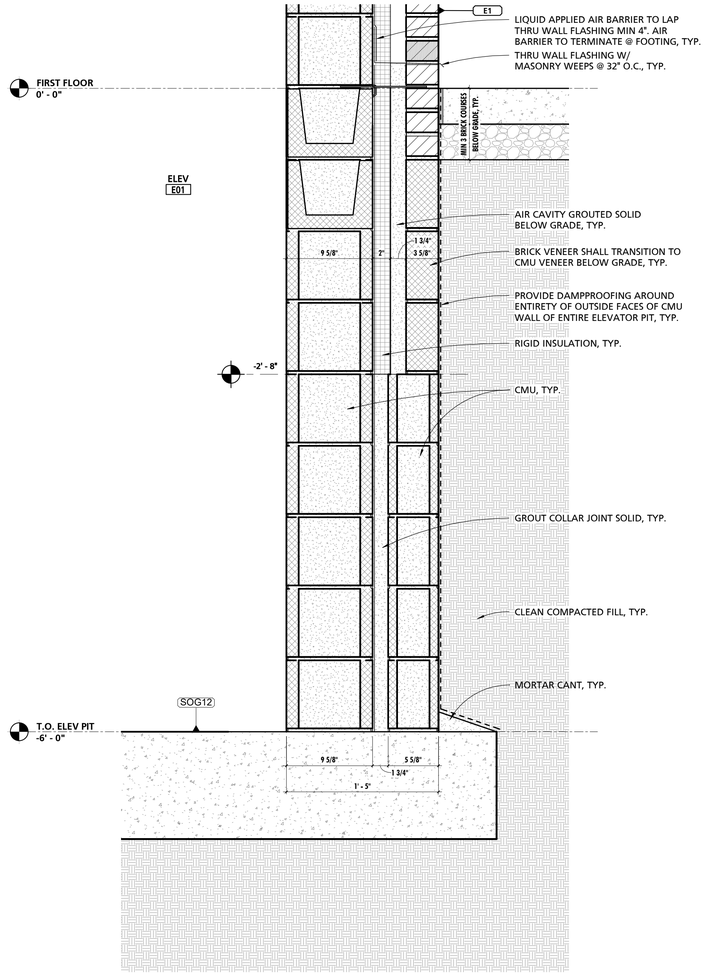
DRAWING TITLE: WALL SECTIONS
SHEET NUMBER: A404

7/20/2021 11:42:46 AM



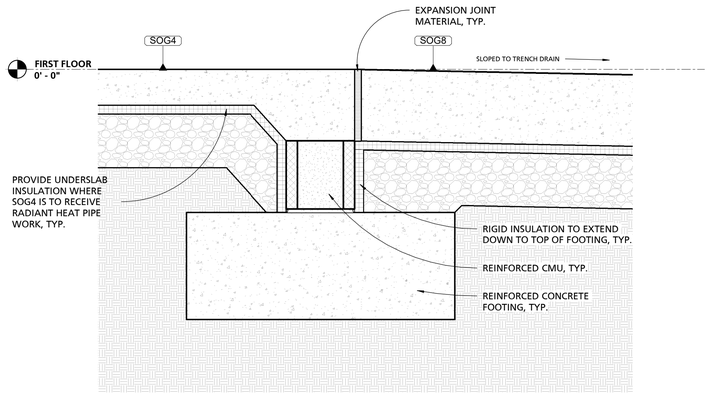
1 TYPICAL EXTERIOR FOUNDATION DETAIL

1 1/2" = 1'-0"



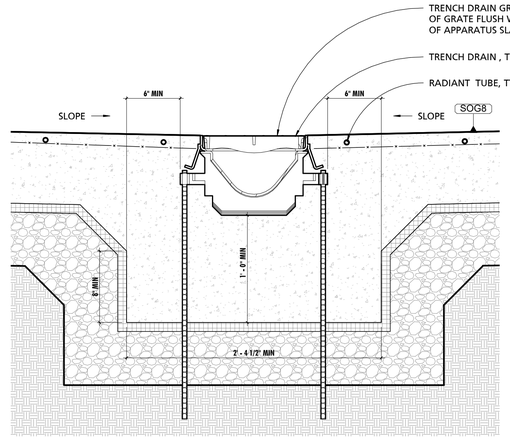
2 TYPICAL ELEVATOR PIT & FOUNDATION DETAIL

1 1/2" = 1'-0"



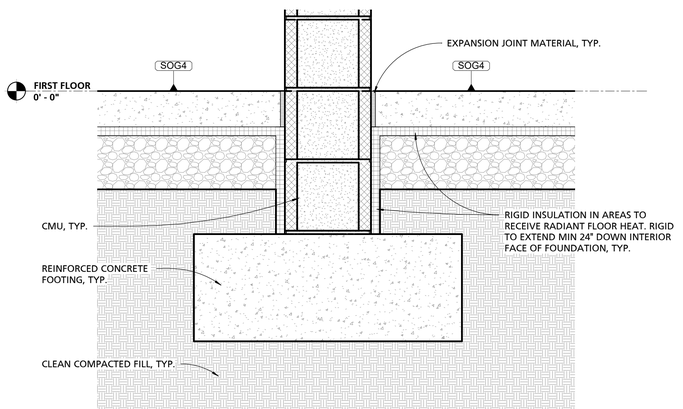
3 TYPICAL SLAB ON GRADE TRANSITION DETAIL

1 1/2" = 1'-0"



4 TYPICAL TRENCH DRAIN DETAIL

1 1/2" = 1'-0"



5 TYPICAL INTERIOR FOUNDATION DETAIL

1 1/2" = 1'-0"

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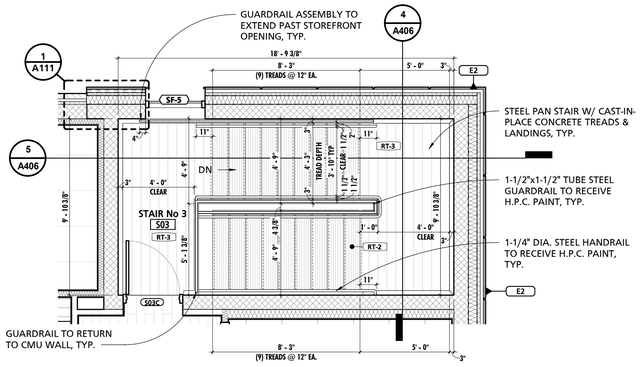
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

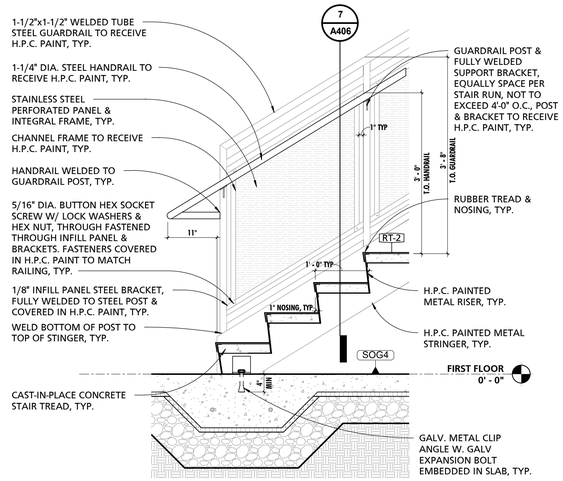
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FOUNDATION/SLAB DETAILS
SHEET NUMBER: A405

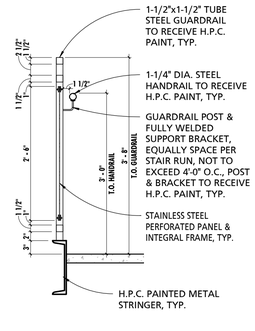
7/20/2021 11:42:50 AM



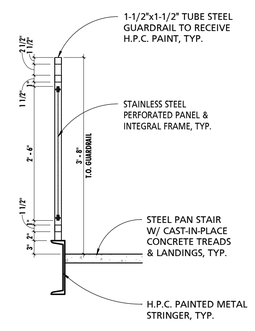
3 STAIR No.3 - SECOND FLOOR LANDING
1/4" = 1'-0"



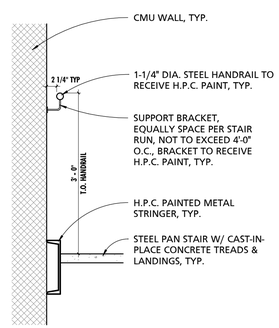
6 TYPICAL STAIR LANDING DETAIL
3/4" = 1'-0"



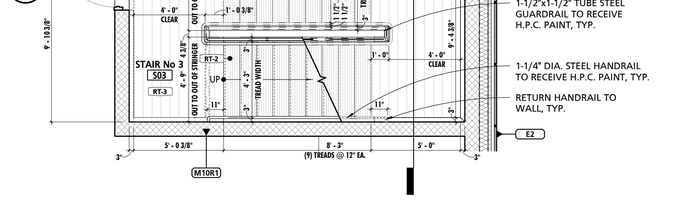
7 TYPICAL RAILING DETAIL
3/4" = 1'-0"



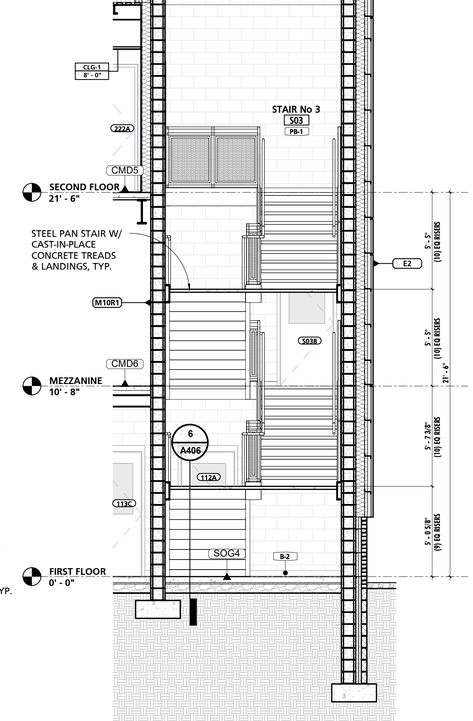
8 TYPICAL GUARDRAIL DETAIL
3/4" = 1'-0"



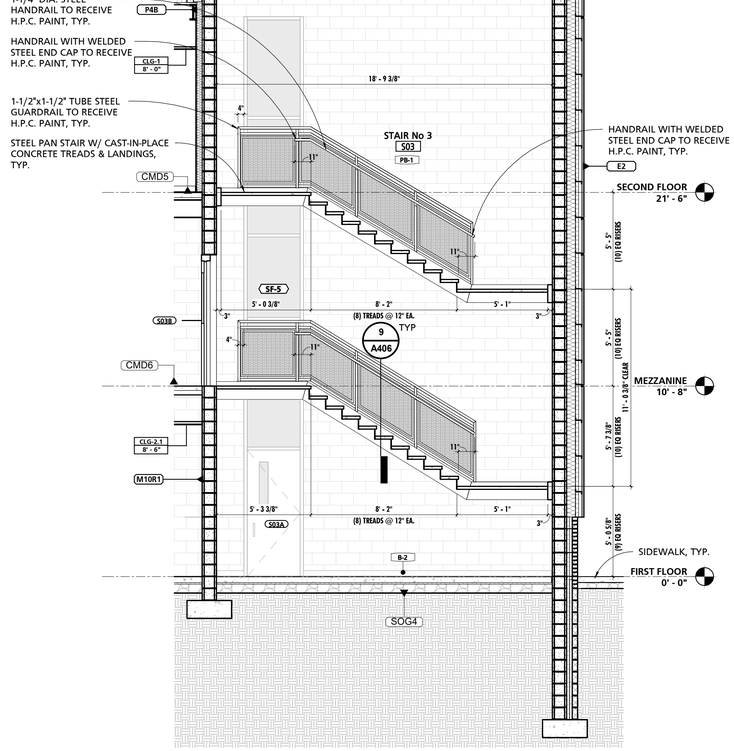
9 TYPICAL HANDRAIL @ CMU WALL
3/4" = 1'-0"



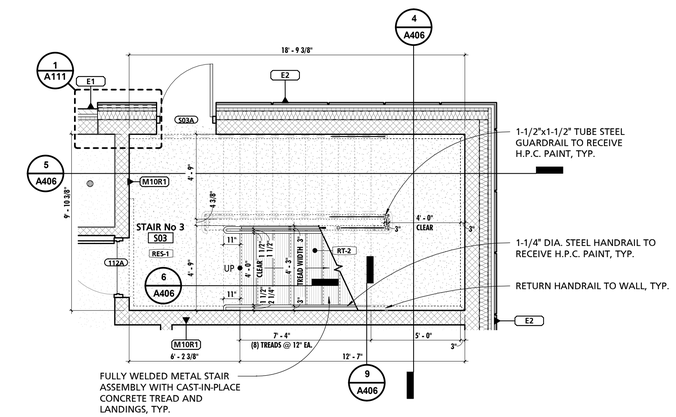
2 STAIR No.3 - MEZZANINE FLOOR LANDING
1/4" = 1'-0"



4 STAIR No.3 - TRANSVERSE SECTION
1/4" = 1'-0"



5 STAIR No.3 - LONGITUDINAL SECTION
1/4" = 1'-0"



1 STAIR No.3 - FIRST FLOOR LANDING
1/4" = 1'-0"

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EXPIRATION DATE: 6-30-2023

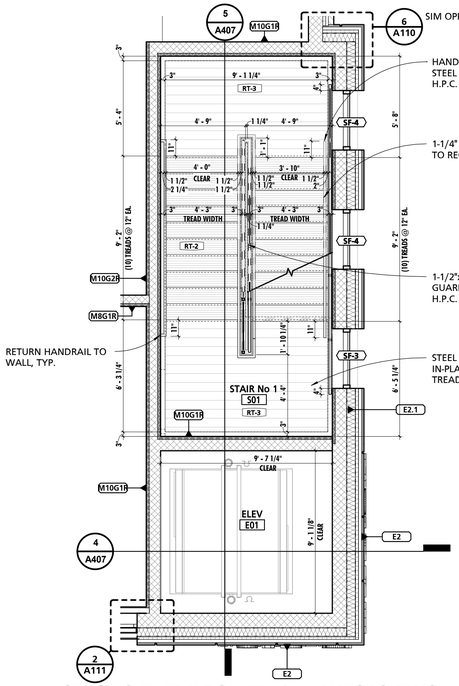
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

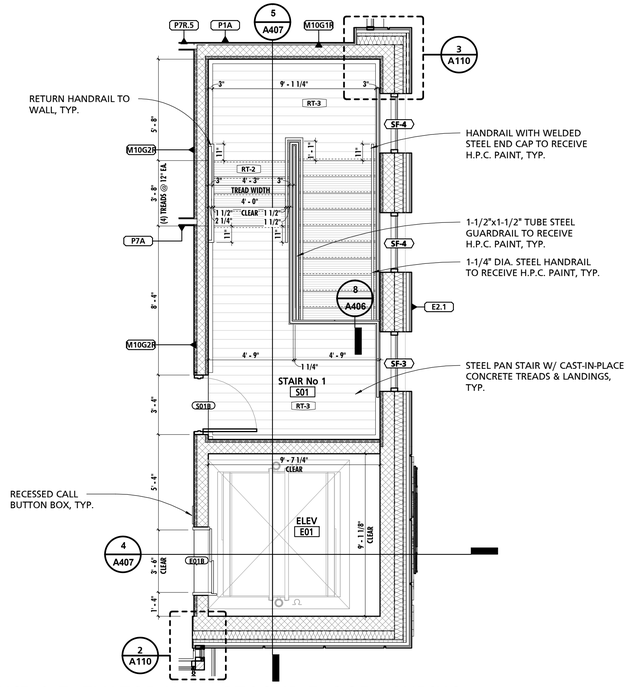
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: STAIR DETAILS
SHEET NUMBER: A406

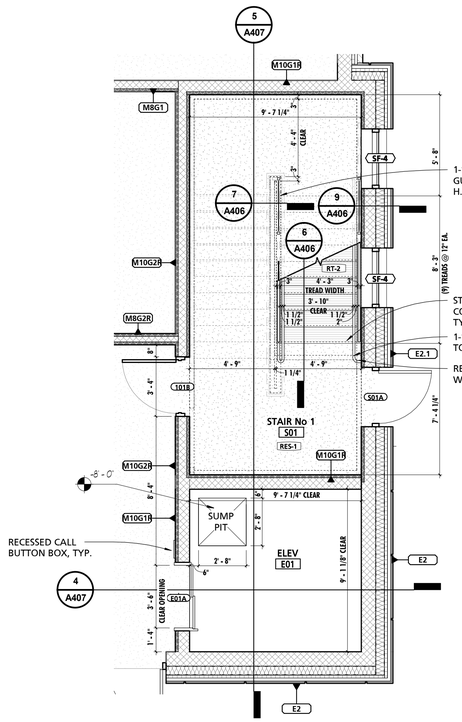
7/20/2021 11:42:55 AM



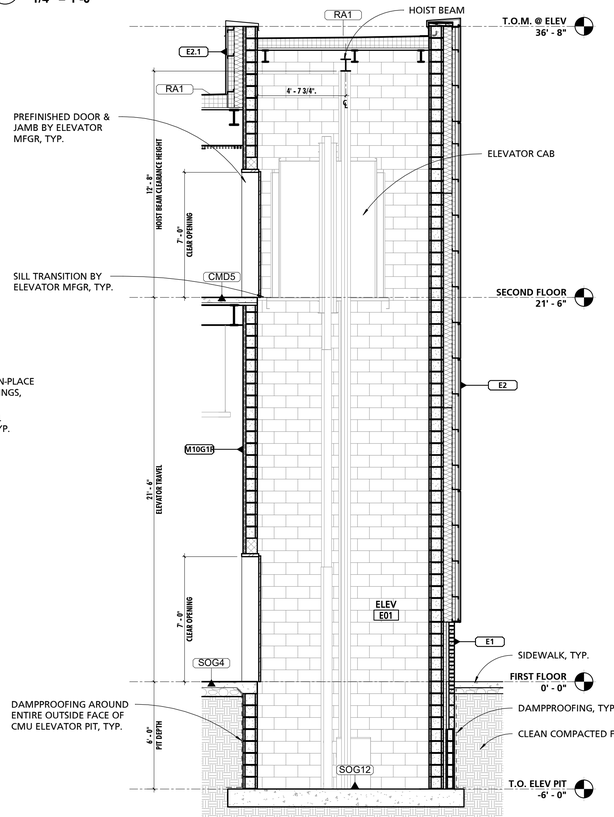
2 STAIR & ELEVATOR No.1 - LANDING TWO
1/4" = 1'-0"



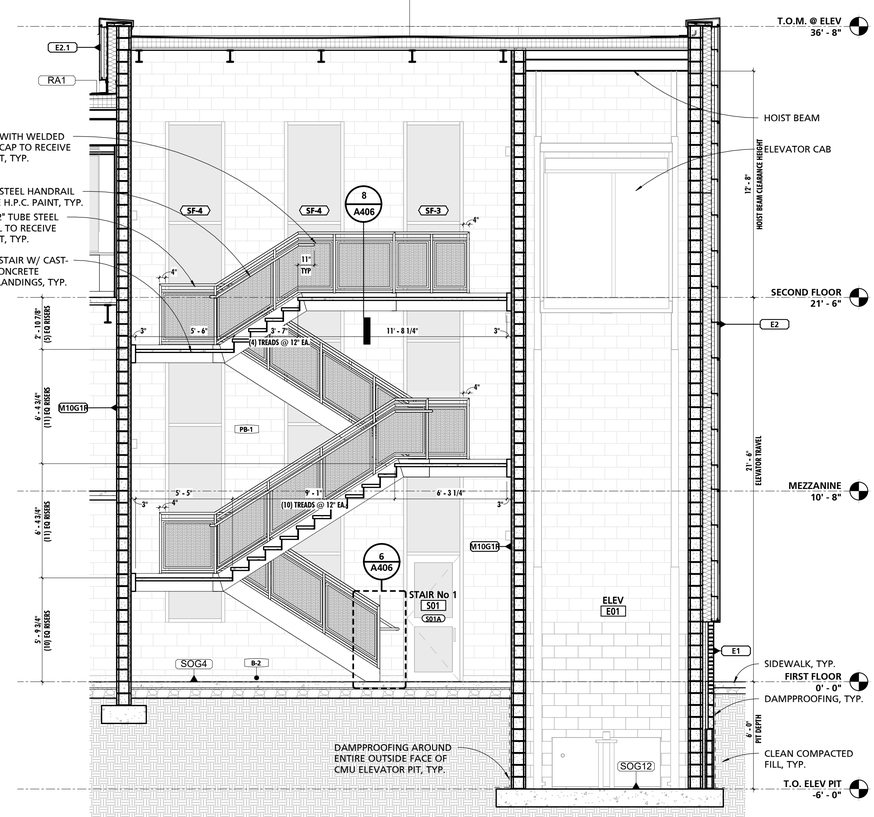
3 STAIR & ELEVATOR No.1 - SECOND FLOOR LANDING
1/4" = 1'-0"



1 STAIR & ELEVATOR No.1 - FIRST FLOOR LANDING
1/4" = 1'-0"



4 STAIR & ELEVATOR No.1 - TRANSVERSE SECTION
1/4" = 1'-0"



5 STAIR & ELEVATOR No.1 - LONGITUDINAL SECTION
1/4" = 1'-0"

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LICENSE NUMBER: #RA405311
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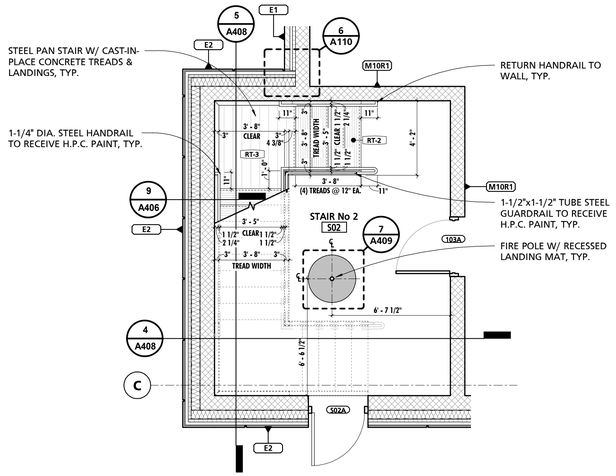
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

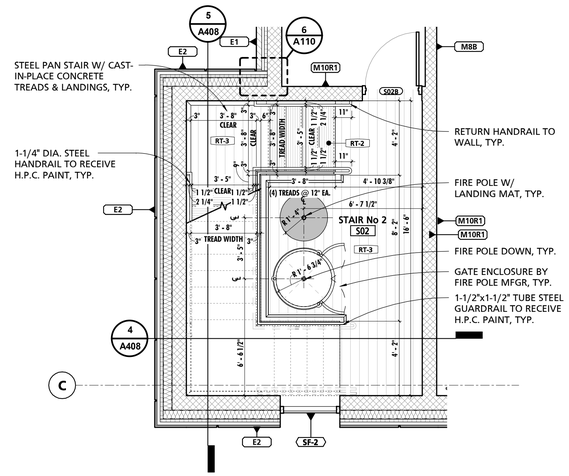
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: STAIRS & ELEVATOR DETAILS
SHEET NUMBER: A407

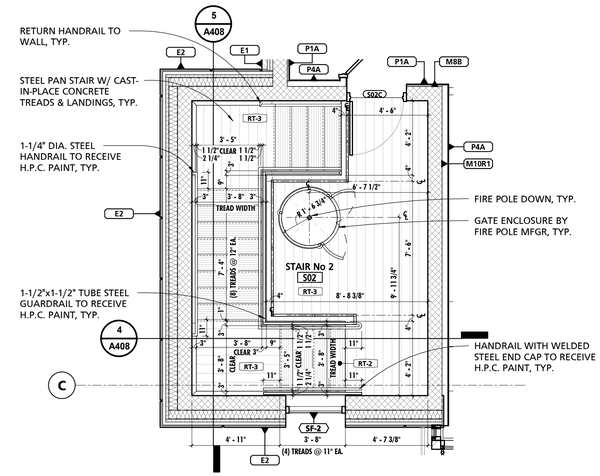
7/20/2021 11:43:00 AM



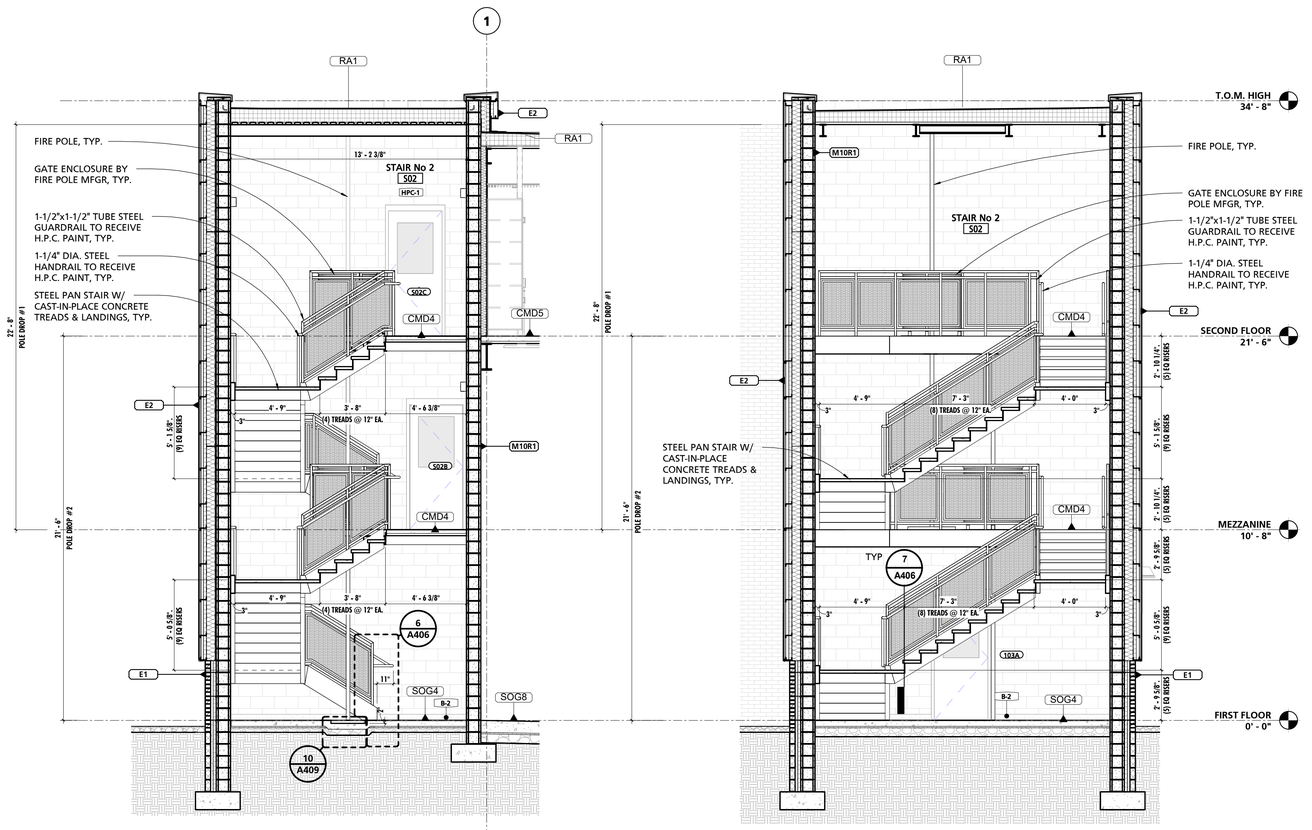
1 STAIR No.2 - FIRST FLOOR LANDING
1/4" = 1'-0"



2 STAIR No.2 - MEZZANINE LANDING
1/4" = 1'-0"

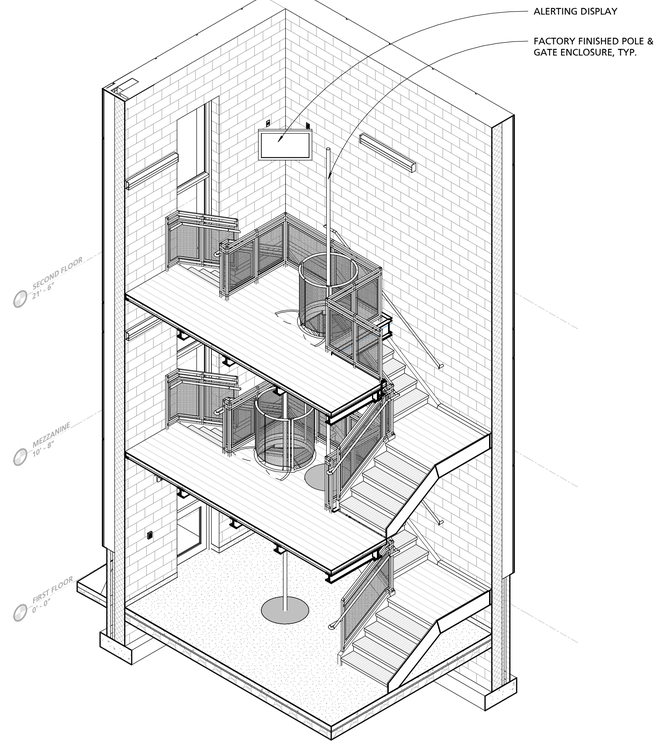


3 STAIR No.2 - SECOND FLOOR LANDING
1/4" = 1'-0"



4 STAIR No.2 - TRANSVERSE SECTION
1/4" = 1'-0"

5 STAIR No.2 - LONGITUDINAL SECTION @ LANDINGS
1/4" = 1'-0"



STAIR No.2 - ISOMETRIC

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

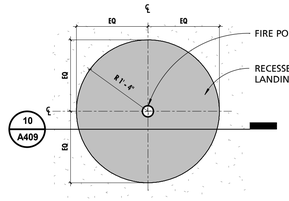
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

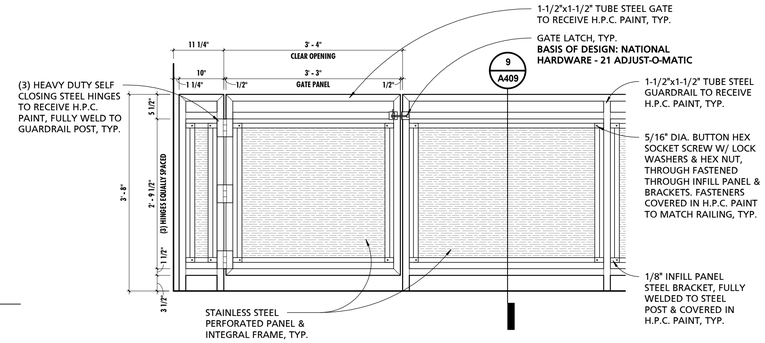
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: STAIR & FIRE POLE DETAILS
SHEET NUMBER: A408

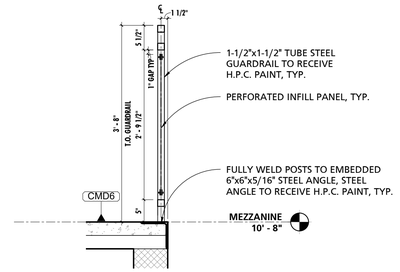
7/20/2021 11:43:07 AM



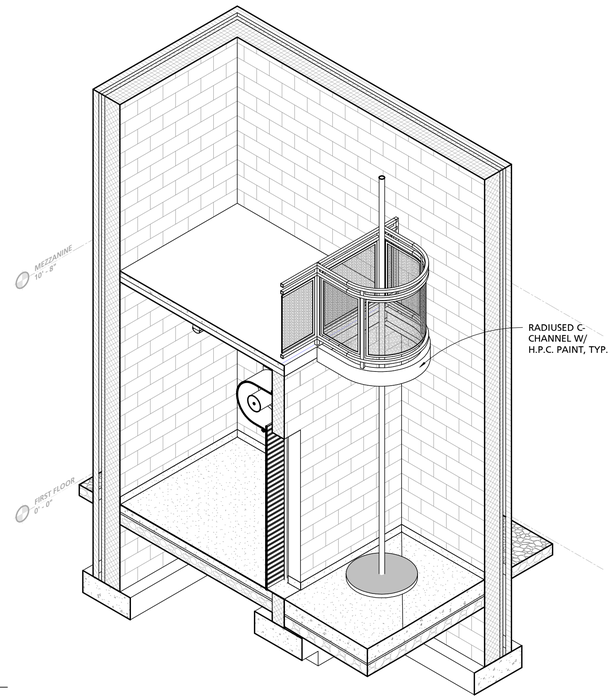
7 TYPICAL RECESSED LANDING MAT DETAIL
3/4" = 1'-0"



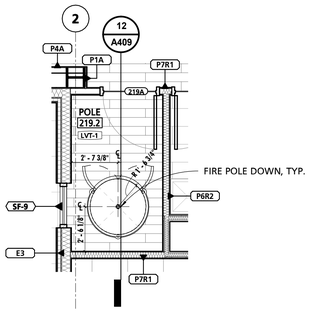
8 ENCLOSURE GATE ELEVATION
3/4" = 1'-0"



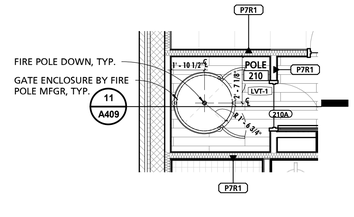
9 POLE MEZZANINE 200.2 - GUARDRAIL DETAIL
3/4" = 1'-0"



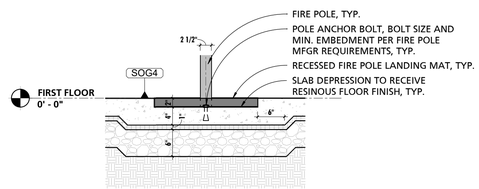
POLE MEZZANINE 200.2 ENCLOSURE & POLE ISOMETERIC



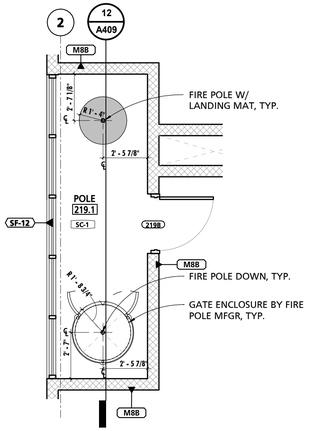
3 POLE 219.2 - SECOND FLOOR
1/4" = 1'-0"



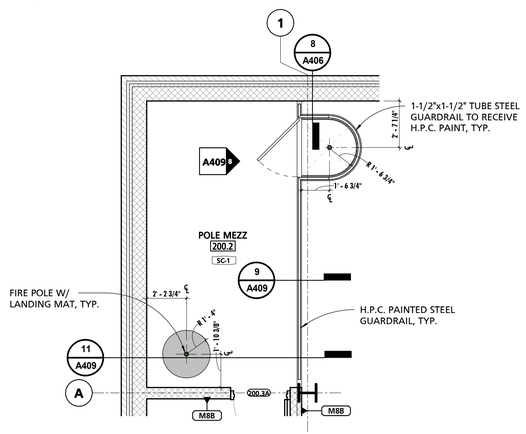
6 POLE 210 - SECOND FLOOR
1/4" = 1'-0"



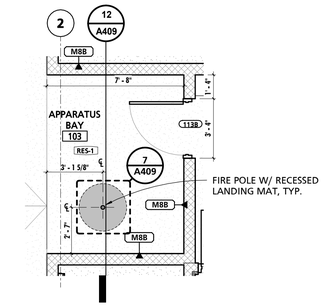
10 TYPICAL DEPRESSED LANDING MAT DETAIL
3/4" = 1'-0"



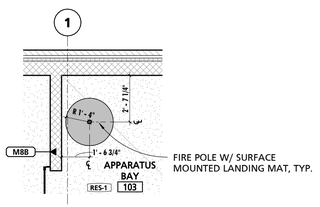
2 POLE 219.1 - MEZZANINE LANDING
1/4" = 1'-0"



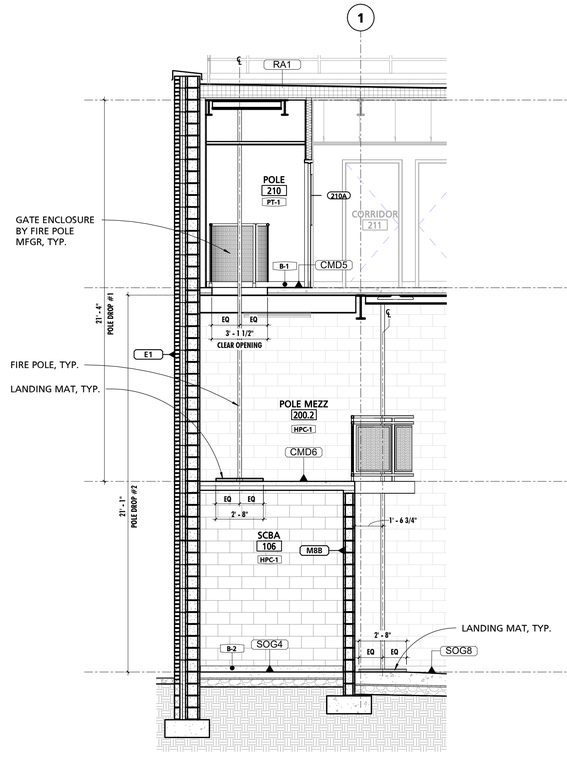
5 POLE 210 - MEZZANINE LANDING
1/4" = 1'-0"



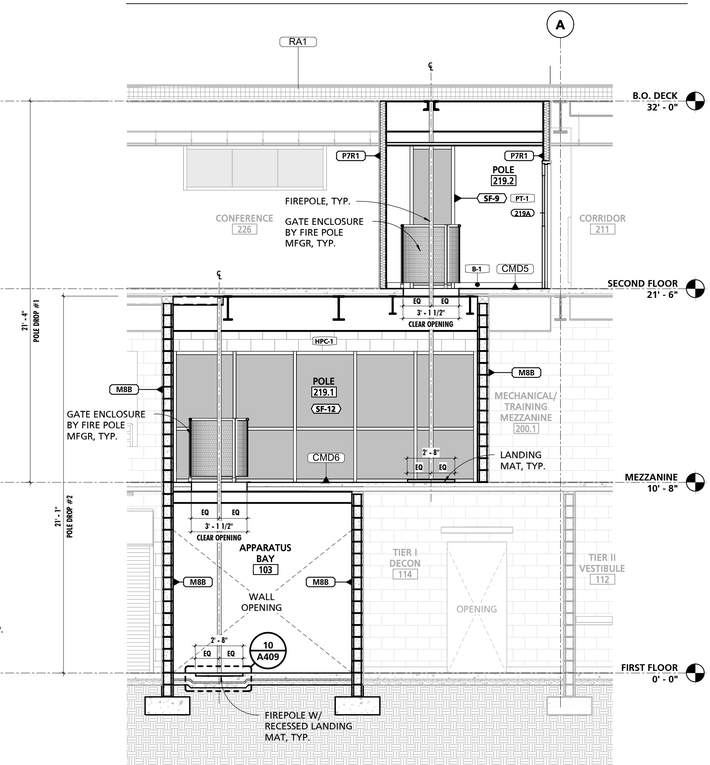
1 POLE 219.1 - FIRST FLOOR LANDING
1/4" = 1'-0"



4 POLE 210 - FIRST FLOOR LANDING
1/4" = 1'-0"



11 POLE 210 - SECTION
1/4" = 1'-0"



12 POLE 219.1 - SECTION
1/4" = 1'-0"

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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

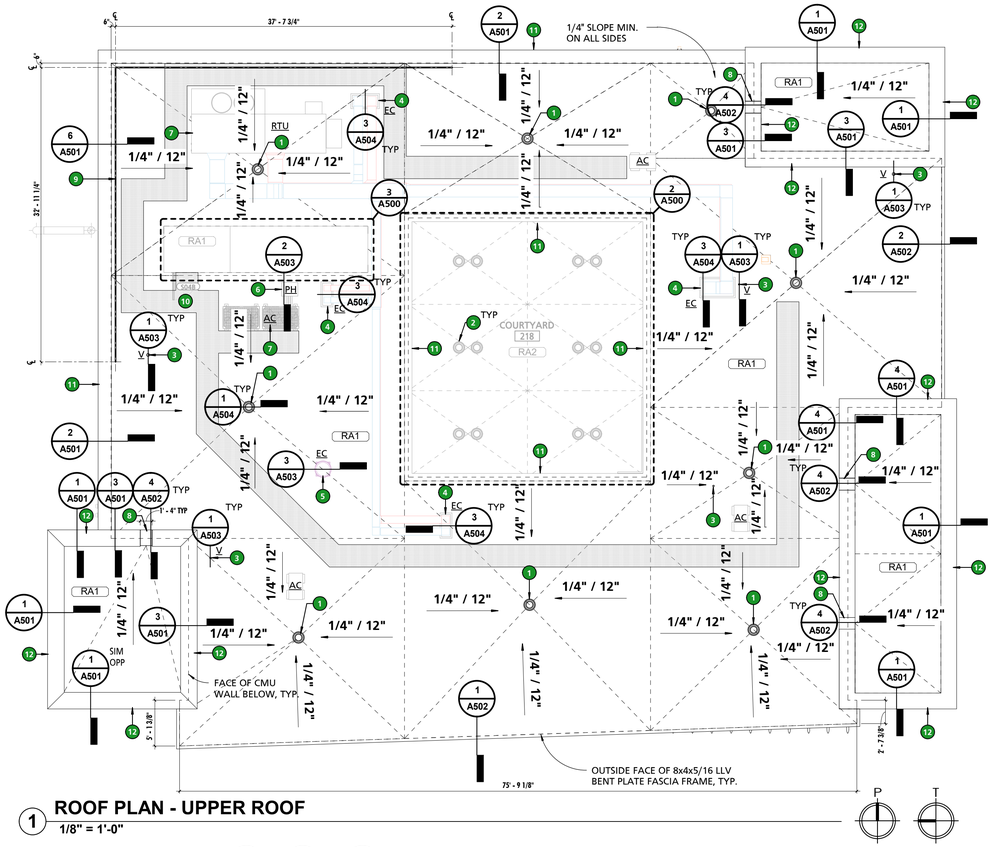
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

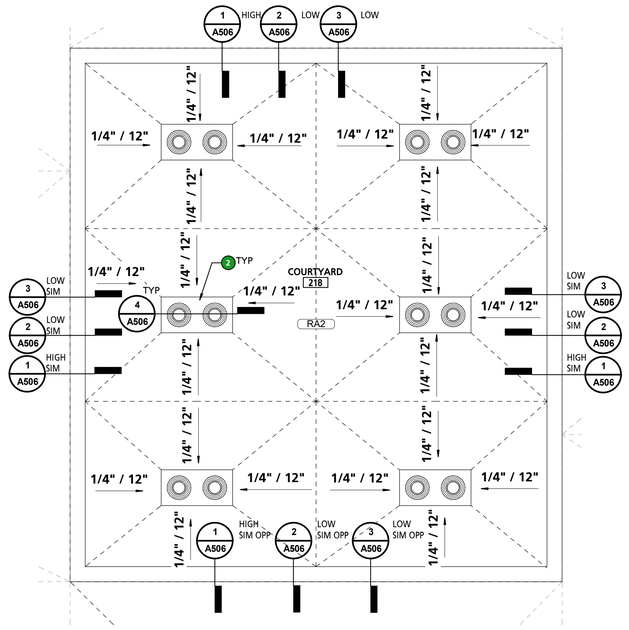
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FIRE POLE DETAILS
SHEET NUMBER: A409

7/20/2021 11:43:14 AM



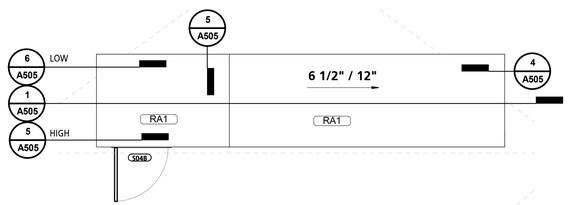
1 ROOF PLAN - UPPER ROOF

1/8" = 1'-0"



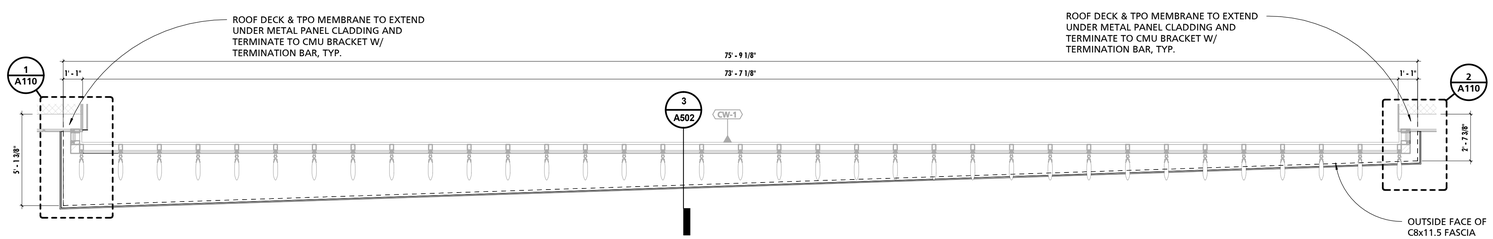
2 ROOF PLAN - COURTYARD

1/4" = 1'-0"



3 ROOF PLAN - ROOF TOP ACCESS ENCLOSURE

1/4" = 1'-0"



4 ROOF PLAN - LOW CANOPY

1/4" = 1'-0"

ROOF ASSEMBLY TYPES

TYPE MARK	DESCRIPTION	COMMENTS
RA1	80 MIL TPO MEMBRANE OVER 1/2" HIGH-DENSITY POLY-ISO BOARD, MIN 5 1/2" RIGID INSULATION AND 1 1/2" METAL DECK	
RA2	90 MIL PMMA RESIN MEMBRANE OVER 1/2" GLASSMAT COVER BOARD AND MIN 5 1/2" RIGID INSULATION OVER 110 MIL SBS MODIFIED BITUMEN VAPOR BARRIER	ROOF ASSEMBLY TO OCCUR OVER FLOOR ASSEMBLY CMD5 @ COURTYARD

GENERAL ROOFING NOTES

NOTE #	NOTE
1	BLOCKING/MISCELLANEOUS FRAMING INDICATED WITHIN THE DOCUMENTS IS SHOWN FOR THE PURPOSES OF DESIGN INTENT. IT SHALL BE THE 1A PRIME CONTRACTORS RESPONSIBILITY, WHETHER SHOWN OR NOT SHOWN, TO PROVIDE BLOCKING/MISCELLANEOUS FRAMING AS REQUIRED TO PROPERLY SUPPORT ALL SUBSTRATES, FLASHINGS, COPINGS, BRAKE METAL, SOFFITS, INSULATIONS, CLIPS, STOPS, MISCELLANEOUS ITEMS, ROOFING MEMBRANES OR SYSTEMS AND SIMILAR ITEMS REQUIRED TO COMPLETE THE WORK.
2	1A PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FINAL ROOFING SUBSTRATE REQUIREMENTS TO ENSURE SUCCESSFUL INSTALLATION OF ROOFING MATERIALS IN A MANNER THAT MAINTAINS THE FULL PRODUCT WARRANTY AND COMPLIES WITH ALL APPLICABLE BUILDING CODES OF THE AHJ.
3	MINIMUM ROOF SLOPE TO DRAINS & SCUPPERS SHALL BE NOT LESS THAN 1/4" PER FOOT.
4	ALL EXTERIOR WOOD BLOCKING TO BE FIRE-RETARDANT PRESSURE-TREATED LUMBER UNLESS NOTED OTHERWISE.
5	ROOF STRUCTURE TO BE FLAT.
6	PROVIDE CRICKETS AT ROOF TOP EQUIPMENT AND CURBS TO ENSURE POSITIVE DRAINAGE TO ROOF DRAINS.
7	SEE DRAWINGS SERIES A500'S FOR ROOF DETAILS
8	PRE-FABRICATED CURBS, EQUIPMENT RAILS AND DUCT SUPPORTS THAT ANCHOR TO THE STRUCTURAL METAL DECK SHALL BE RESPONSIBILITY OF MECHANICAL PRIME CONTRACTOR. THE ROOFING TIE-IN FLASHING OF SUCH COMPONENT SHALL BE THE RESPONSIBILITY OF THE 1A CONTRACTOR.

REFERENCED NOTES - ROOF PLANS

NO.	NOTE
1	ROOF DRAIN W/ CAST IRON BODY & POLYETHYLENE STRAINER, BY PLUMBING PRIME CONTRACTOR
2	PRIMARY & OVERFLOW ROOF DRAINS W/ CAST IRON BODY & POLYETHYLENE STRAINER, BY PLUMBING PRIME CONTRACTOR
3	PLUMBING VENT THRU ROOF
4	PREFORMED INSULATED METAL CURB AT DUCTWORK ENCLOSURE
5	PREFORMED INSULATED METAL CURB AT EXHAUST FAN EQUIPMENT
6	PREFORMED INSULATED METAL CURB AT PIPE ENCLOSURE
7	MECHANICAL EQUIPMENT BY MECHANICAL PRIME CONTRACTOR
8	THRU PARAPET SCUPPER
9	2 3/8" OD. GALVANIZED METAL GUARDRAIL
10	TPO WALKWAY PAD
11	PRE-FINISHED PARAPET CAP
12	COMPOSITE METAL PANEL COPING

ROOF PLAN ABBREVIATIONS

AC	-	COMPRESSOR ON EQUIPMENT RAILS. SEE ROOF DETAILS.
DS	-	DUCT SUPPORT
EC	-	EQUIPMENT CURB. SEE ROOF DETAILS
PP	-	PIPE PENETRATION. SEE ROOF DETAILS.
PH	-	PIPE PENETRATION HOUSING. SEE ROOF DETAILS.
RTU	-	ROOF TOP UNIT ON PRE-FABRICATED EQUIPMENT CURB. SEE ROOF DETAILS.
V	-	VENT. SEE ROOF DETAILS.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

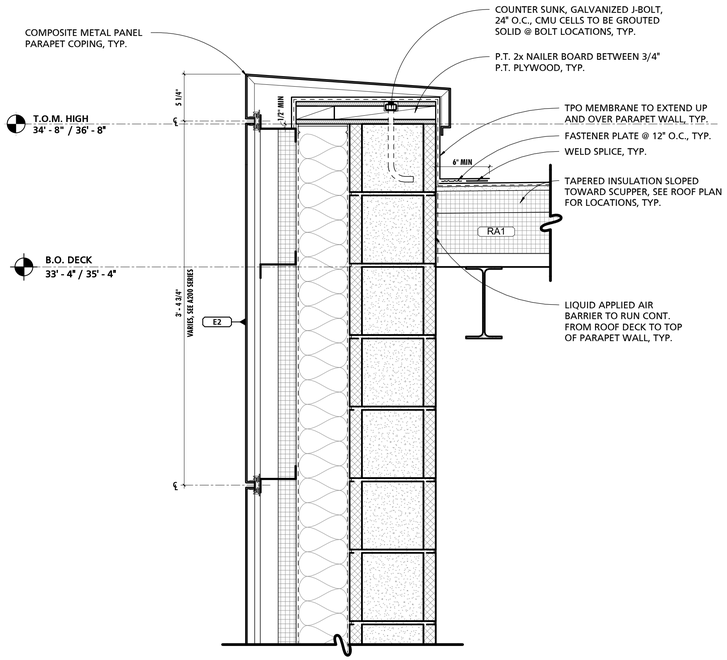
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

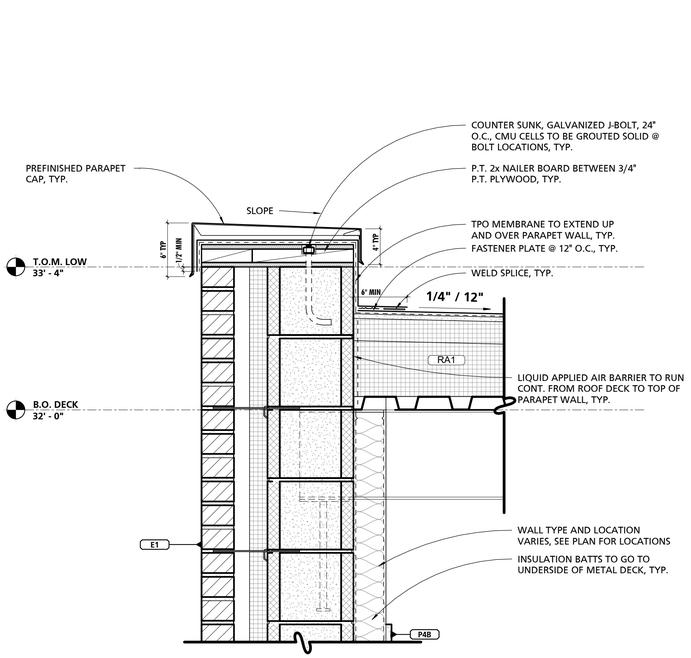
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: ROOF PLAN
SHEET NUMBER: A500

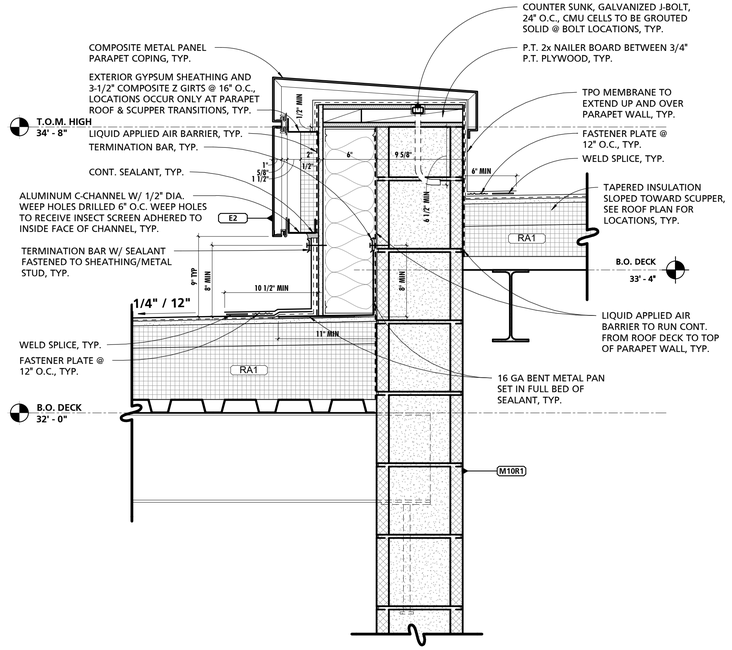
7/20/2021 11:43:24 AM



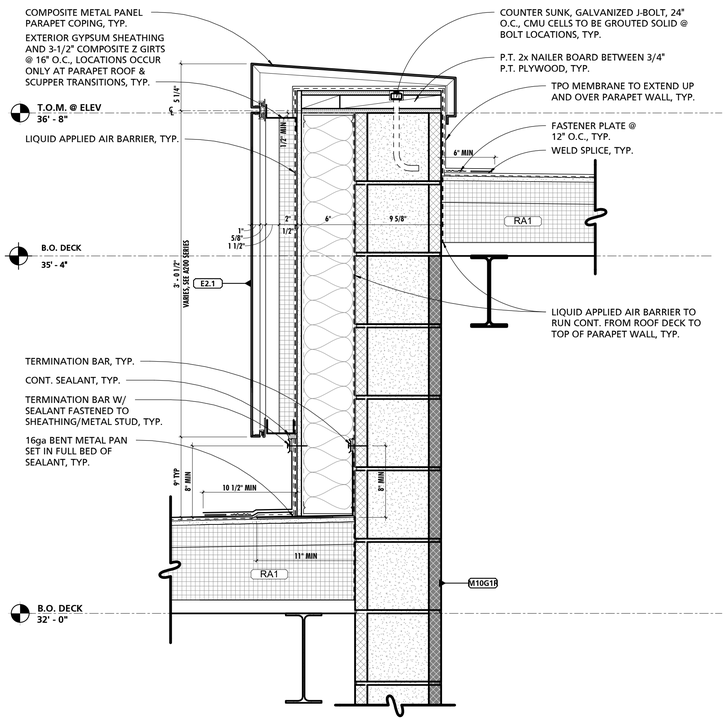
1 TYPICAL STAIR TOWER PARAPET DETAIL
1 1/2" = 1'-0"



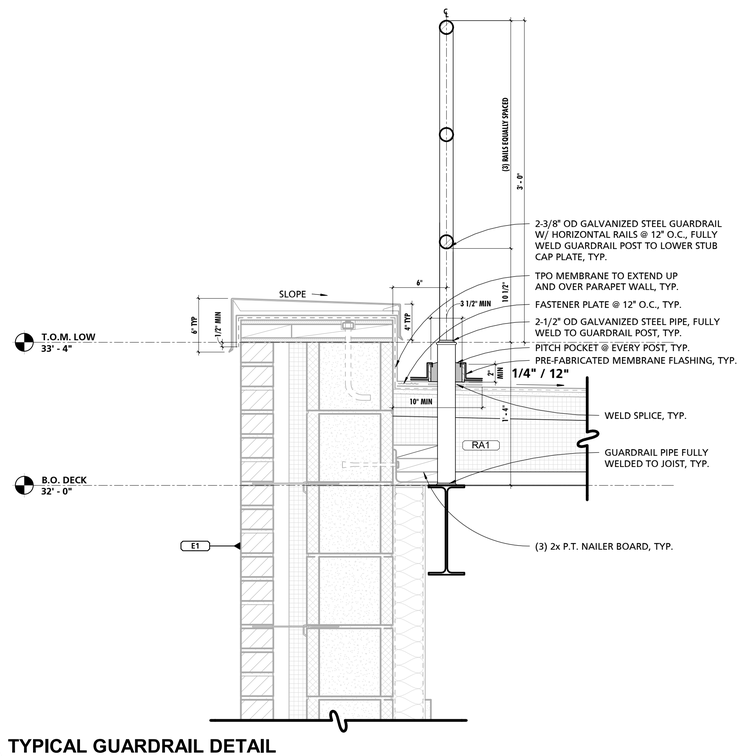
2 TYPICAL PARAPET DETAIL
1 1/2" = 1'-0"



3 TYPICAL PARAPET - ROOF TRANSITION DETAIL
1 1/2" = 1'-0"



4 TYPICAL ELEVATOR TOWER PARAPET - ROOF TRANSITION DETAIL
1 1/2" = 1'-0"



6 TYPICAL GUARDRAIL DETAIL
1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

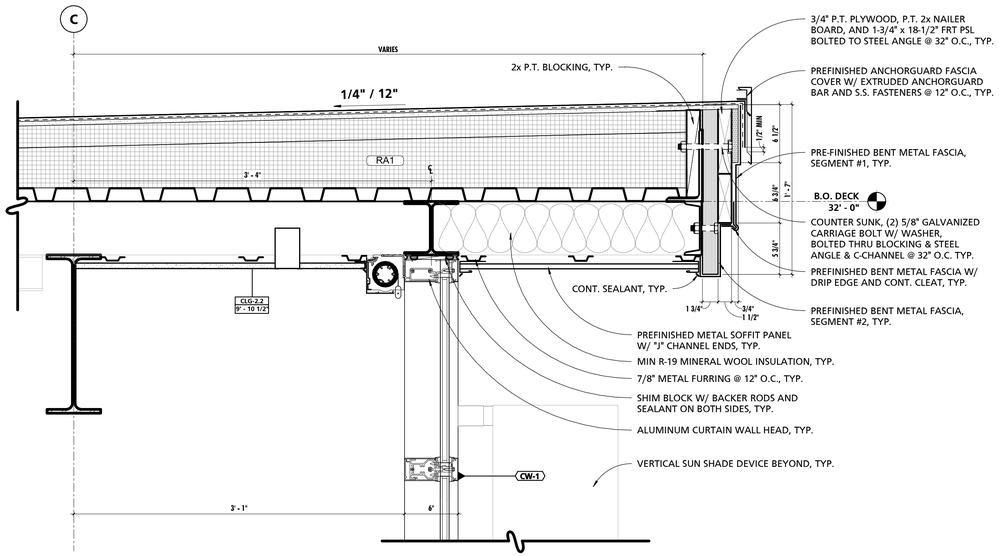
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

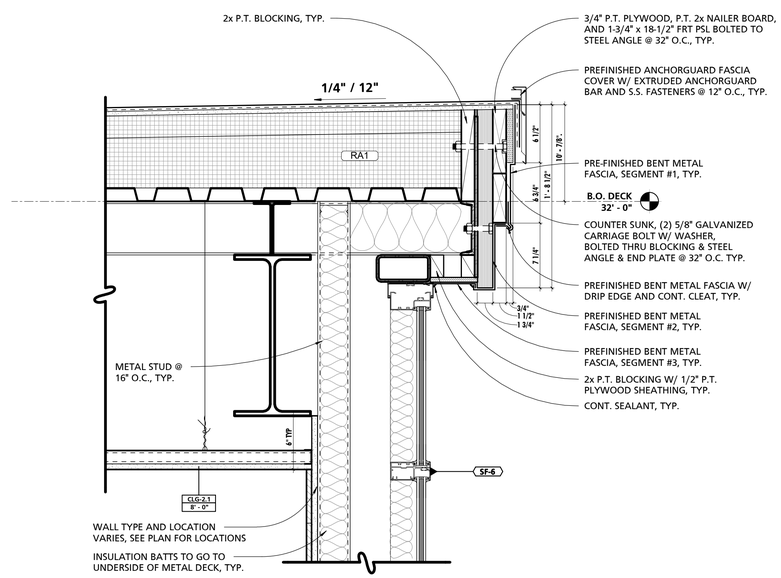
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ROOF DETAILS
SHEET NUMBER: A501

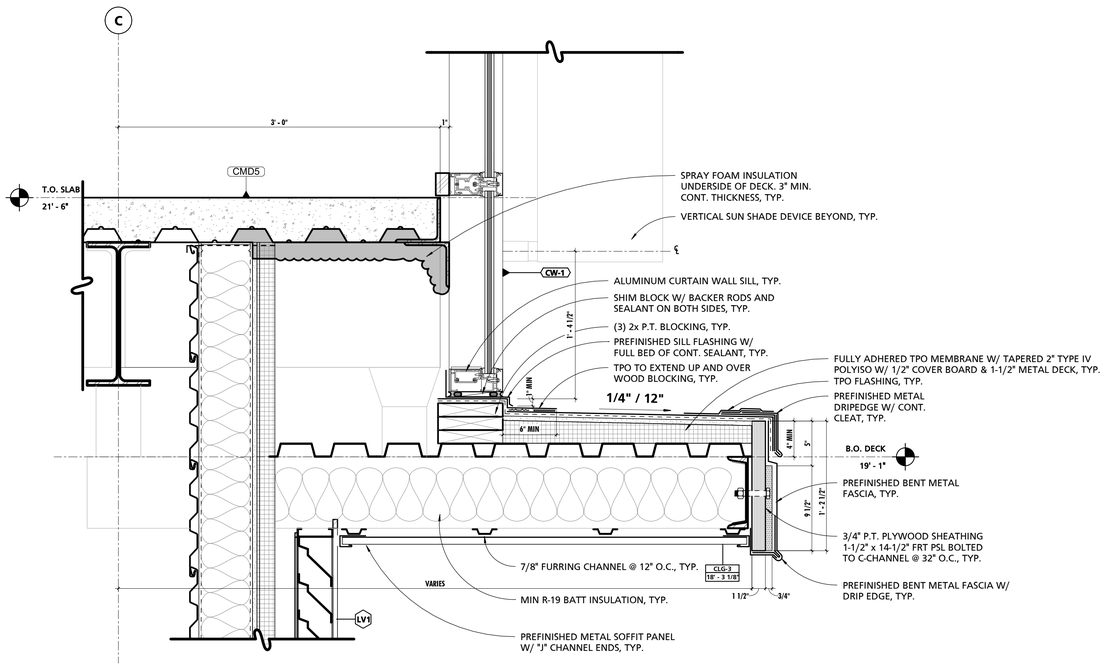
7/20/2021 11:43:27 AM



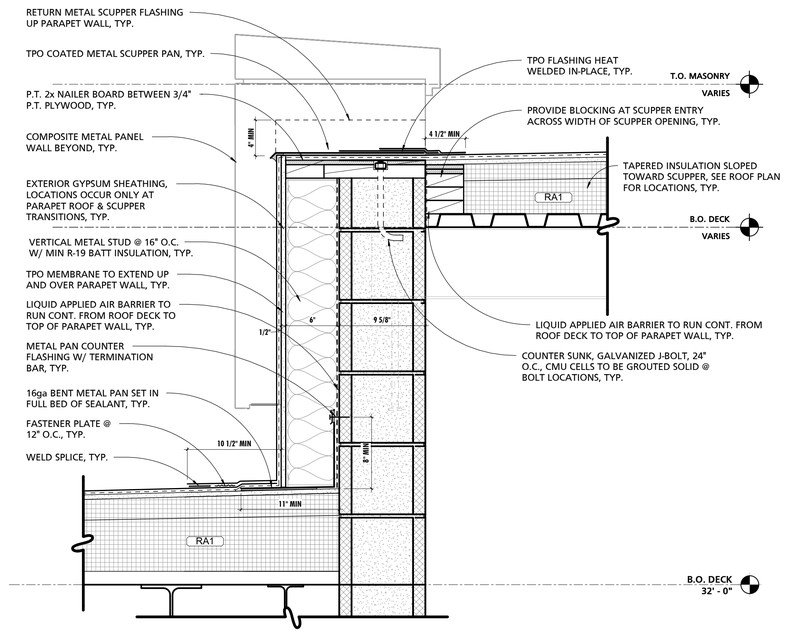
1 OVERHANG @ CURTAIN WALL
1 1/2" = 1'-0"



2 ROOF EDGE DETAIL @ STOREFRONT
1 1/2" = 1'-0"



3 CANOPY @ APPARATUS ENTRANCE
1 1/2" = 1'-0"



4 TYPICAL SCUPPER DETAIL
1 1/2" = 1'-0"

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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA WOODWARD RAMSEY

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

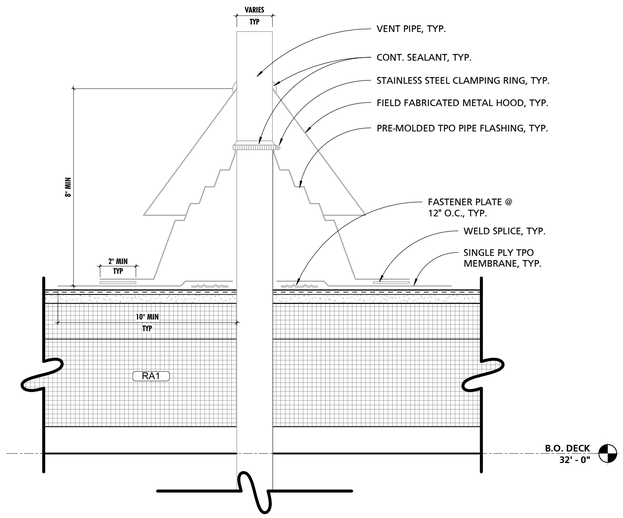
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

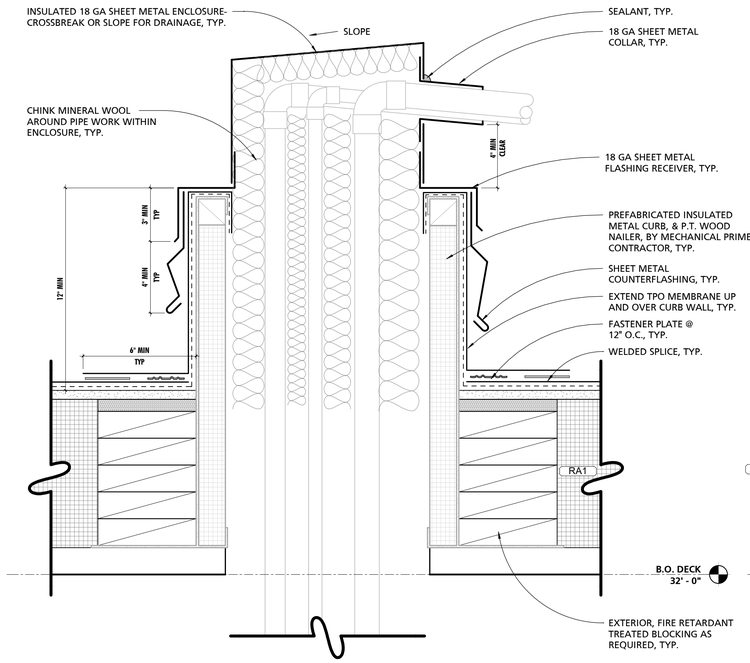
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: ROOF DETAILS
SHEET NUMBER: A502

7/20/2021 11:43:30 AM



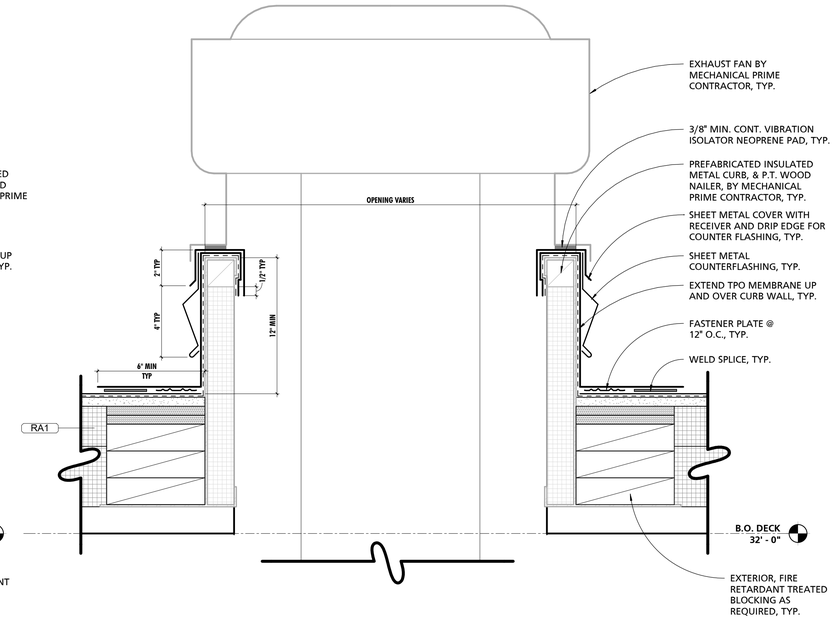
1 TYPICAL VENT PIPE DETAIL

3" = 1'-0"



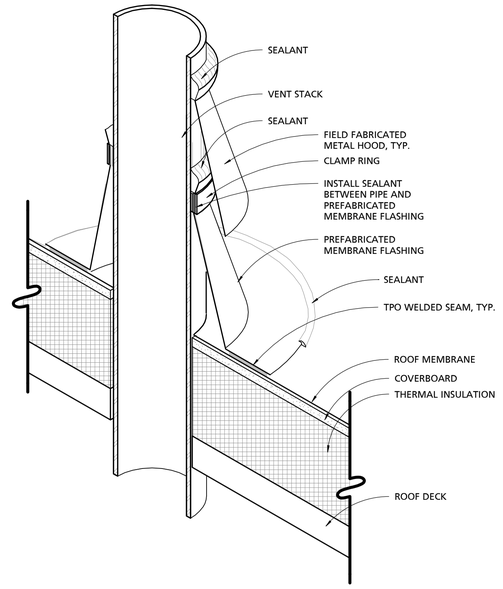
2 TYPICAL CURB DETAIL @ PIPE ENCLOSURE

3" = 1'-0"



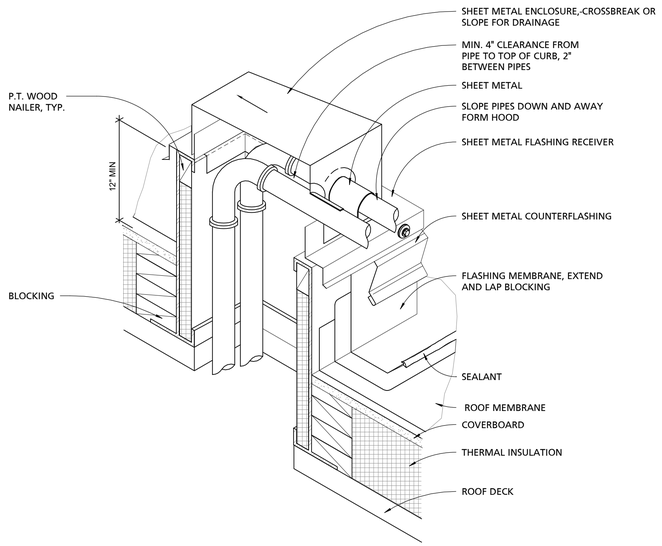
3 TYPICAL EQUIPMENT CURB DETAIL

3" = 1'-0"



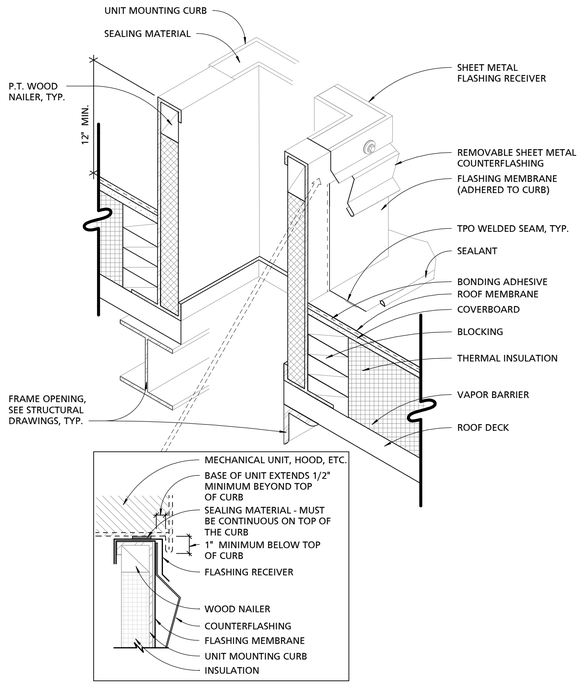
4 TYPICAL VENT FLASHING AXON

3" = 1'-0"



5 TYPICAL SHEET METAL PIPE PENETRATION AXON

3" = 1'-0"



6 TYPICAL EQUIPMENT CURB AXON

3" = 1'-0"

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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. LICENSE NUMBER: #RA405311 EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

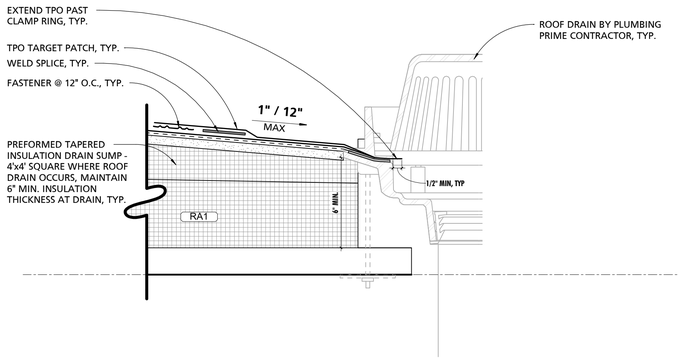
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

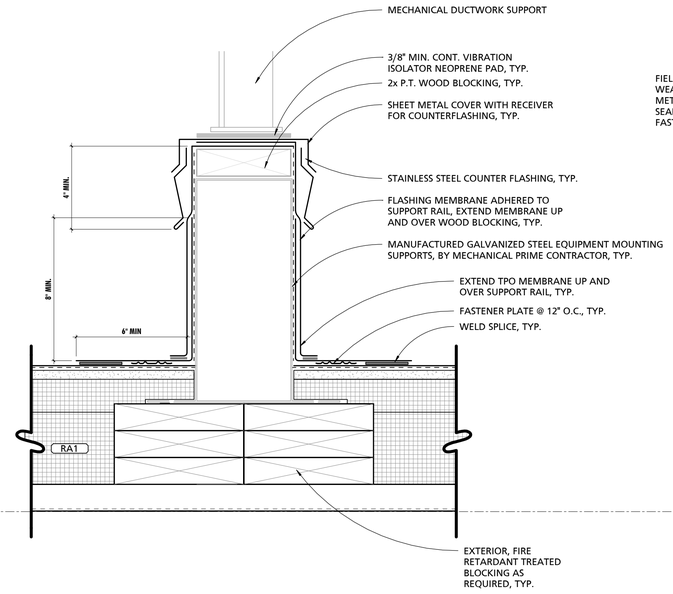
DRAWING TITLE: ROOF DETAILS

SHEET NUMBER: A503

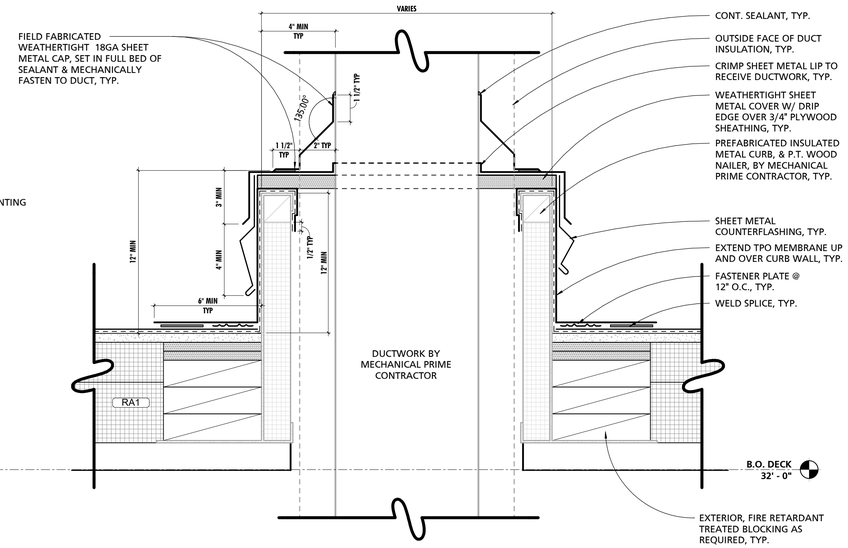
7/20/2021 11:43:32 AM



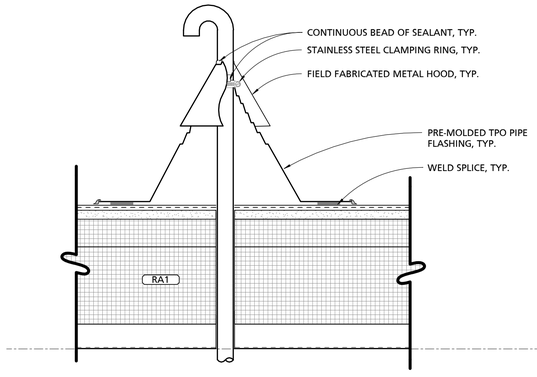
1 TYPICAL ROOF DRAIN DETAIL - UPPER ROOF
3" = 1'-0"



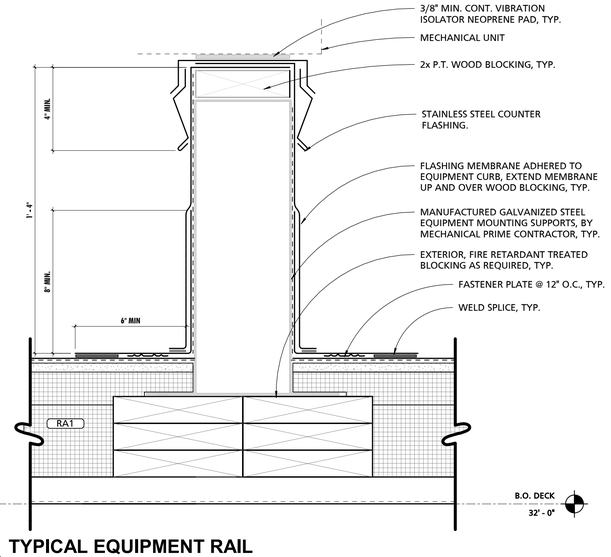
2 TYPICAL DUCTWORK SUPPORT RAIL
3" = 1'-0"



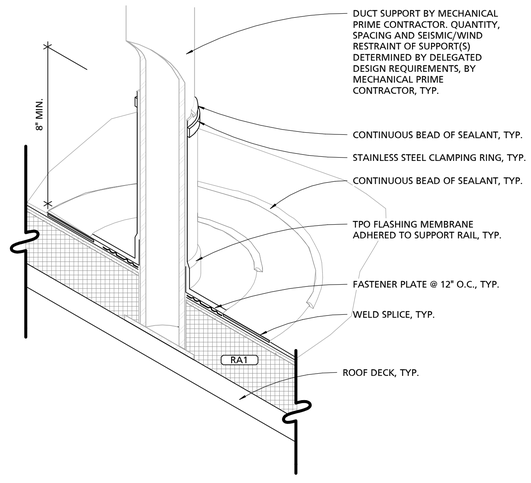
3 TYPICAL CURB DETAIL @ DUCTWORK PENETRATION
3" = 1'-0"



4 TYPICAL CONDUIT PENETRATION
3" = 1'-0"



5 TYPICAL EQUIPMENT RAIL
3" = 1'-0"



6 TYPICAL DUCTWORK RACK SUPPORT RAIL
3" = 1'-0"

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

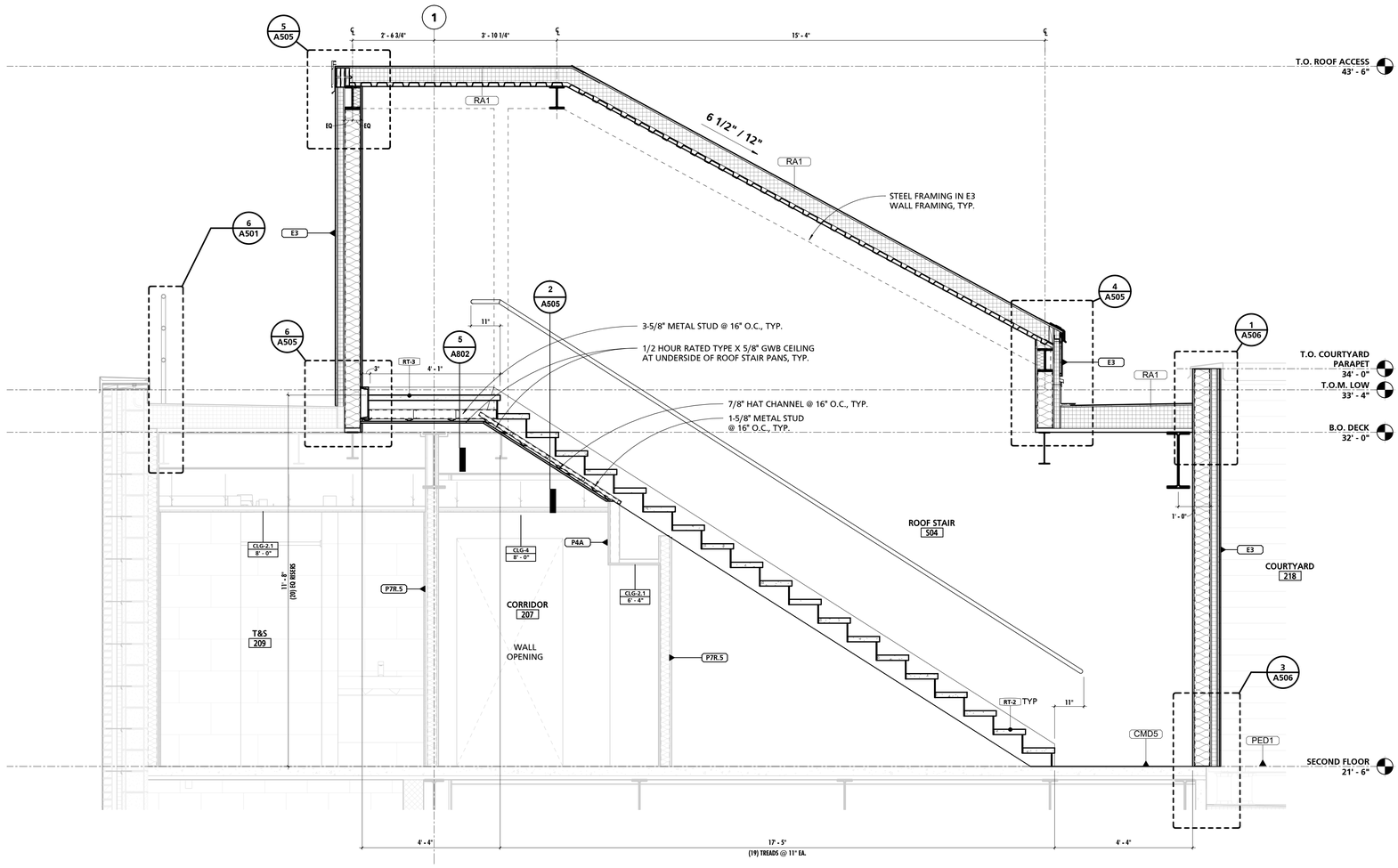
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

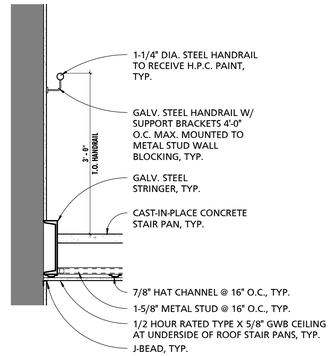
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: ROOF DETAILS
SHEET NUMBER: A504

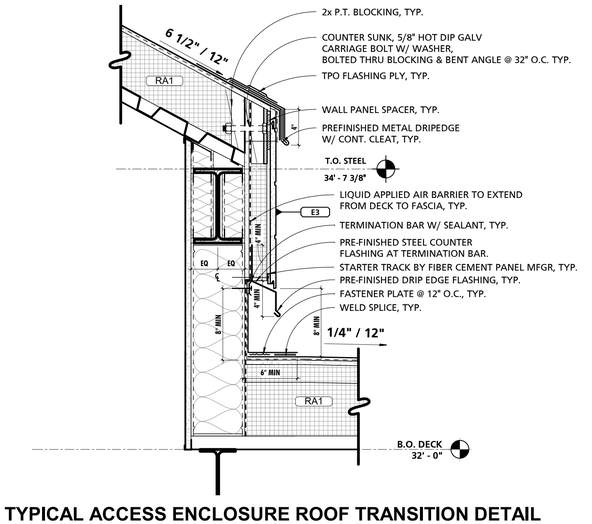
7/20/2021 11:43:35 AM



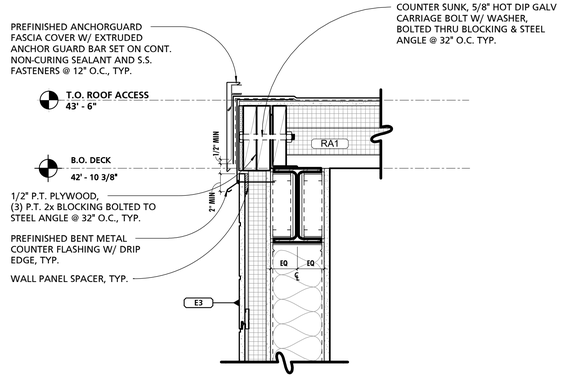
1 ROOF TOP ACCESS ENCLOSURE SECTION
1/2" = 1'-0"



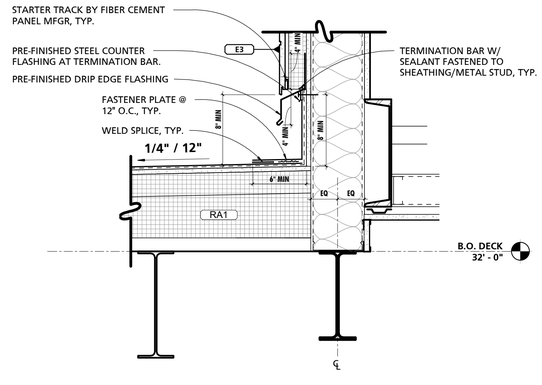
2 TYPICAL ACCESS ENCLOSURE HANDRAIL DETAIL
3/4" = 1'-0"



4 TYPICAL ACCESS ENCLOSURE ROOF TRANSITION DETAIL
1 1/2" = 1'-0"



5 TYPICAL ACCESS ENCLOSURE ROOF EDGE DETAIL
1 1/2" = 1'-0"



6 ROOF TO E3 WALL DETAIL
1 1/2" = 1'-0"

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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. LICENSE NUMBER: #RA405311 EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

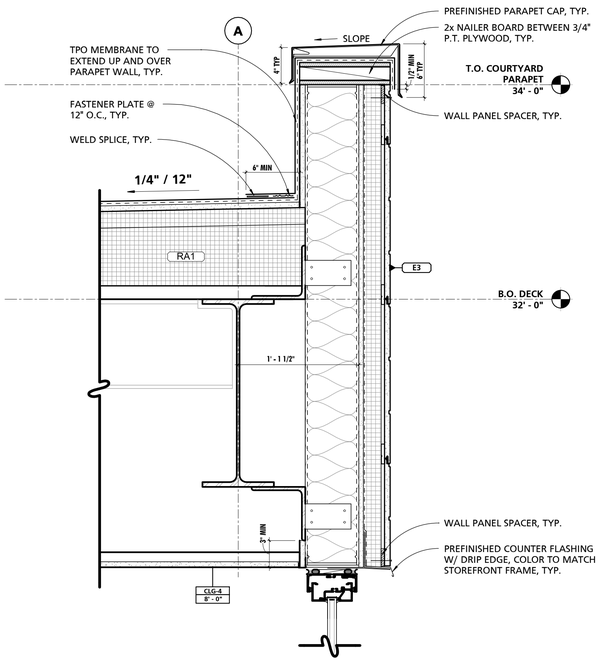
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

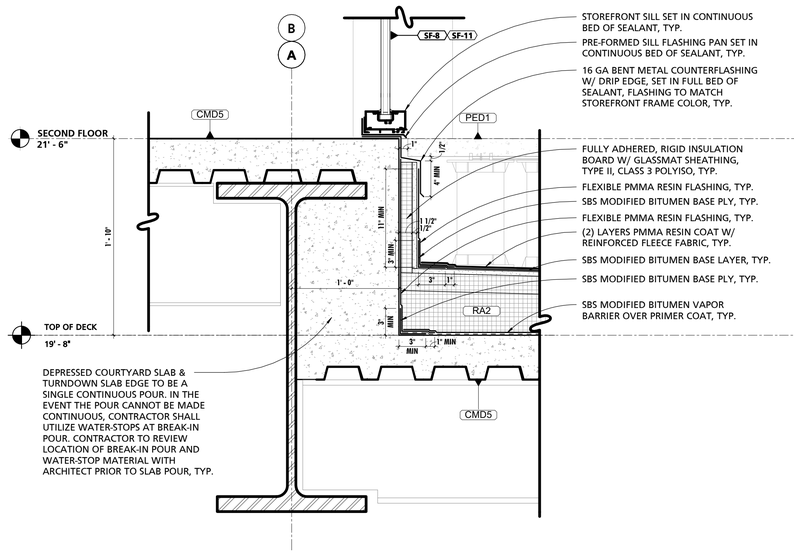
DRAWING TITLE: ROOF DETAILS - ROOF TOP ACCESS ENCLOSURE

SHEET NUMBER: A505

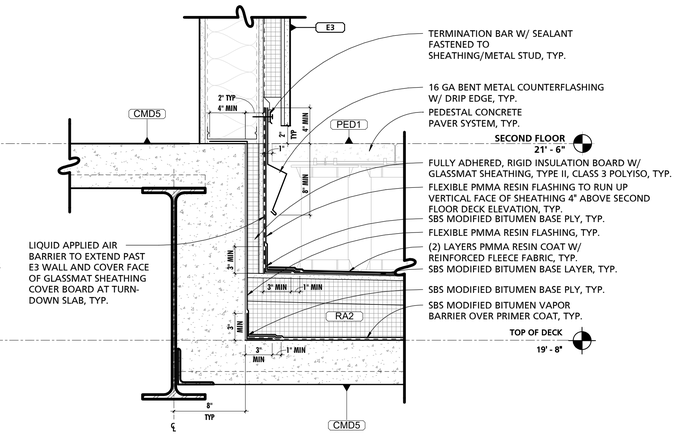
7/20/2021 11:43:38 AM



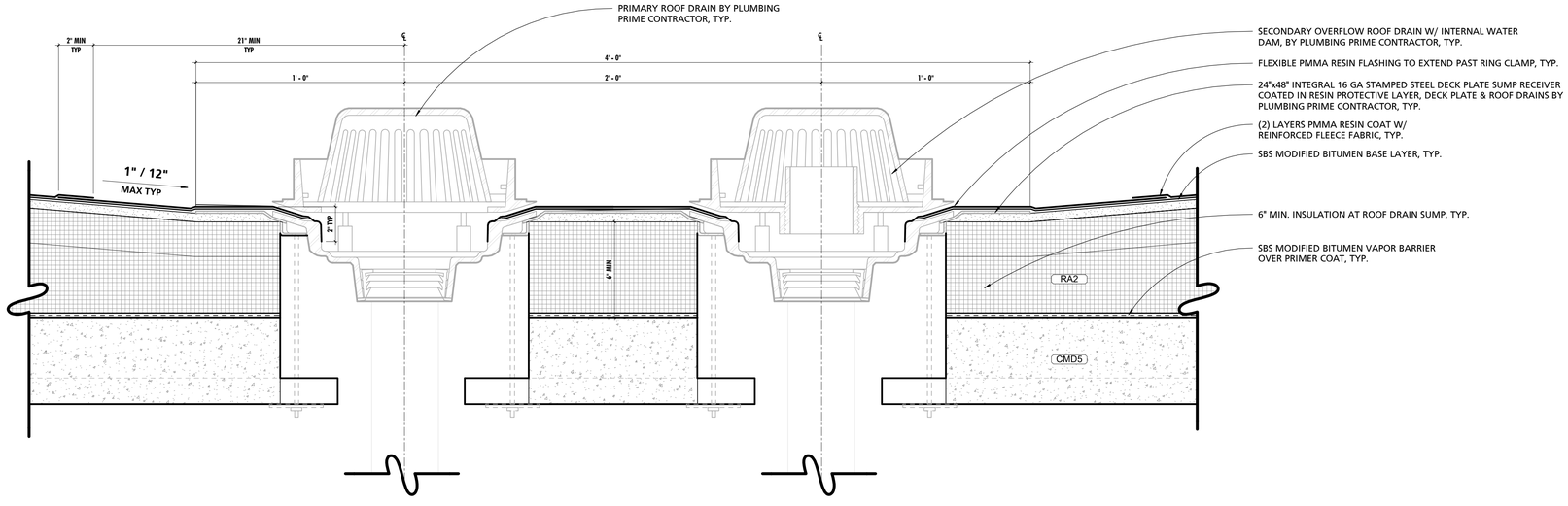
1 TYPICAL COURTYARD PARAPET DETAIL
1 1/2" = 1'-0"



2 TYPICAL ROOF DETAIL @ COURTYARD STOREFRONT SILL
1 1/2" = 1'-0"



3 TYPICAL ROOF DETAIL @ COURTYARD SLAB
1 1/2" = 1'-0"



4 TYPICAL COMBINED PRIMARY & OVERFLOW ROOF DRAINS @ COURTYARD ROOF
3" = 1'-0"

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CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: ROOF DETAILS - COURTYARD
SHEET NUMBER: A506

7/20/2021 11:43:40 AM

DOOR SCHEDULE

MARK	DOOR PANEL SIZE	TYPE	THICKNESS	MATERIAL	FINISH	FRAME TYPE	FRAME SIZE SUMMARY OVERALL HEIGHT	FRAME SIZE SUMMARY OVERALL WIDTH	FRAME PROFILE SUMMARY DEPTH	FRAME PROFILE SUMMARY THROAT	FRAME PROFILE SUMMARY HEAD	FRAME PROFILE SUMMARY JAMB	FRAME MATERIAL	FRAME FINISH	GLAZING THICKNESS	GLAZING TYPE	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	RATINGS FIRE (IN MINUTES)	HARDWARE SET	COMMENTS
101B	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	5/16"	GL1R	H-5	J-5	N/A	45	23	
101C	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1/4"	GL1	H-5	J-5	N/A		19	
102A	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1/4"	GL1	H-5	J-5	N/A		7	
103A	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	N/A	45	21	
103B	(2) 3'-0" x 7'-0"	PANEL : N2	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	6' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL4	H-7	J-7	S-1		4	
104A	3'-0" x 7'-0"	PANEL : F	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-5	J-5	N/A		19	
108A	3'-0" x 7'-0"	PANEL : F	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-5	J-5	N/A		16	
110A	3'-0" x 7'-0"	PANEL : F	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	4 7/8"	3 7/8"	4"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-4	J-4	–		16	
111A	3'-0" x 7'-0"	PANEL : F	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	4 7/8"	3 7/8"	4"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-4	J-4	–		16	
112A	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	N/A	45	14	
112B	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	4 7/8"	3 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1/4"	GL1	H-4	J-4	N/A		22	
113A	3'-0" x 7'-0"	PANEL : N2	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	5/16"	GL1R	H-5	J-5	N/A	0	14	
113B	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2	H-5	J-5	N/A		22	
113C	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1/4"	GL1	H-5	J-5	N/A		9	
114A	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1/4"	GL1	H-5	J-5	N/A		22	
115A	3'-0" x 7'-0"	PANEL : N2	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	5/16"	GL1R	H-5	J-5	N/A	45	15	
116A	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	N/A	45	23	
200.3A	3'-0" x 7'-0"	PANEL : F	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-5	J-5	N/A		14	
201A	(1) 3'-0" (1) 2'-0" x 7'-0"	PANEL : G2	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	5' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-1	J-1	FT-8	20	13	
201B	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1/4"	GL1	H-1	J-1	N/A		8	
202A	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1/4"	GL1	H-2	J-2	FT-2		7	
205A	(2) 2'-2" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	4' - 8"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	N/A		10	
206A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-5	20	17	
207A	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1/4"	GL1	H-1	J-1	FT-8		12	
208A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-5	20	17	
209A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-5	20	17	
210A	2'-6" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 2"	2' - 10"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1"	GL2R	H-1	J-1	N/A	45	24	
211A	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1/4"	GL1	H-1	J-1	FT-8		8	
212A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
213A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
214A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
215A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
216A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
217A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
219A	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1"	GL2R	H-1	J-1	N/A	45	24	
219B	3'-0" x 7'-0"	PANEL : G	1 3/4"	HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	N/A	0	14	
220A	3'-0" x 7'-0"	PANEL : N2	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-1	J-1	FT-5	20	11	
222A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-2	20	11	
222B	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-6	0	11	
223A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2.1	J-2.1	N/A		16	
224A	3'-0" x 7'-0"	PANEL : N2	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-1	J-1	N/A	20	20	
224B	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-5		7	
225A	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	1/4"	GL1	H-1	J-1	FT-8		8	
226A	3'-0" x 7'-0"	PANEL : N2	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-1	J-1	FT-2	20	18	
227A	(2) 3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	6' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	FT-9	0	25	
228A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 3/8"	5 3/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-2	J-2	FT-5	20	17	
229A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	6 7/8"	5 7/8"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-3	J-3	N/A		19	
230A	3'-0" x 7'-0"	PANEL : FG	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	5 7/8"	4 7/8"	2"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-1	J-1	FT-3	20	11	
S01B	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-5	J-5	FT-7	45	14	
S02B	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	FT-4	45	14	
S02C	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-6	J-6	FT-7	45	14	
S03B	3'-0" x 7'-0"	PANEL : G	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	H.P.C.	1"	GL2R	H-5	J-5	FT-4	45	14	
S03C	3'-0" x 7'-0"	PANEL : G	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 4"	3' - 4"	5 7/8"	4 7/8"	4"	2"	HOLLOW METAL	PAINTED	5/16"	GL1R	H-6	J-6	FT-7	45	14	
S04A	3'-0" x 7'-0"	PANEL : F	1 3/4"	SOLID CORE WOOD	PRE-FINISHED	HM ST	7' - 2"	3' - 4"	8 1/4"	7 1/4"	2"	2"	HOLLOW METAL	PAINTED	0"	N/A	H-1	J-1	N/A		22	
S04B	3'-0" x 7'-0"	PANEL : F	1 3/4"	INSULATED HOLLOW METAL	H.P.C.	HM ST	7' - 2"	3' - 4"	8 5/8"	7 5/8"	2"	2"	HOLLOW METAL	H.P.C.	0"	N/A	H-8	J-8	S-2		5	

1

STOREFRONT DOOR SCHEDULE

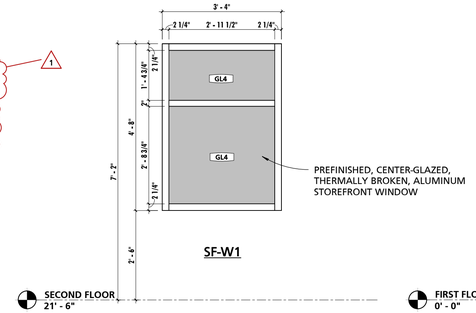
MARK	DOOR SIZE	MATERIAL	FINISH	GLAZING THICKNESS	GLAZING TYPE	DETAILS THRESHOLD	HARDWARE	COMMENTS
101A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	3	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	6	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218B	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	6	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218C	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	6	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S01A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	2	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S02A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	1	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S03A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6	1	DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS

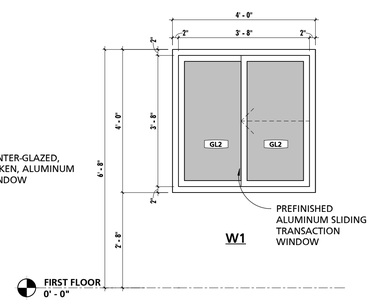
FOUR-FOLD & OVERHEAD DOOR SCHEDULE

MARK	DOOR SIZE	DESCRIPTION	MATERIAL	FINISH	GLAZING THICKNESS	GLAZING TYPE	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	COMMENTS
105A	6'-0"W x 7'-4"H	OVERHEAD COILING	STEEL	PREFINISHED			OH-H1	OH-J1	N/A	DOOR LIFT ACCESS BY CARDREADER CONTROL
106A	6'-0"W x 7'-4"H	OVERHEAD COILING	STEEL	PREFINISHED			OH-H1	OH-J1	N/A	DOOR LIFT ACCESS BY CARDREADER CONTROL
107A	6'-0"W x 7'-4"H	OVERHEAD COILING	STEEL	PREFINISHED			OH-H1	OH-J1	N/A	DOOR LIFT ACCESS BY CARDREADER CONTROL
109A	4'-8"W x 7'-4"H	OVERHEAD COILING	STEEL	PREFINISHED			OH-H1	OH-J1	N/A	DOOR LIFT ACCESS BY CARDREADER CONTROL
FFD1	14'-0" x 14'-0"	INSULATED FOUR-FOLD	STEEL	PREFINISHED	1"	GL4	FF-H1	FF-J1/J2	FF-S1	
FFD2	14'-0" x 14'-0"	INSULATED FOUR-FOLD	STEEL	PREFINISHED	1"	GL4	FF-H1	FF-J1	FF-S1	
FFD3	14'-0" x 14'-0"	INSULATED FOUR-FOLD	STEEL	PREFINISHED	1"	GL4	FF-H1	FF-J1	FF-S1	
OHD-1	14'-0" x 14'-0"	INSULATED OVERHEAD SECTIONAL	ALUMINUM	PREFINISHED	1"	GL4	OH-H2	OH-J2	OH-S1	

WINDOW SCHEDULE

TYPE MARK	OPERATION	SIZE WIDTH	SIZE HEIGHT	SILL HEIGHT	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	COMMENTS
SF-W1	FIXED	3' - 4"	4' - 8"	2' - 6"	SW-H1	SW-J1	SW-S1	
W1	SLIDING TRANSACTION WINDOW	4' - 0"	4' - 0"	2' - 8"	W-H1	W-J1	W-S1	





GLAZING LEGEND

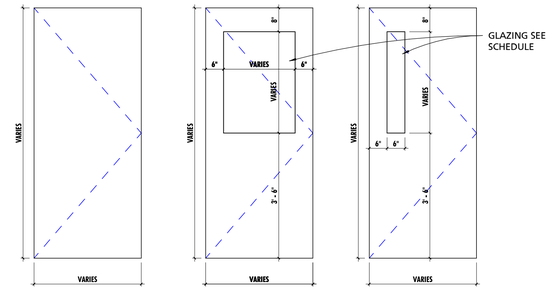
MARK	DESCRIPTION	COMMENTS
GL1	1/4" CLEAR SAFETY GLAZING	
GL1R	5/16" CLEAR RATED SAFETY GLAZING	45 MINUTE RATED/30 MINUTE RATED
GL2	1" INSULATED SAFETY GLAZING	
GL2	1" INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL3	1" LOW-E INSULATED GLAZING	
GL4	1" LOW-E INSULATED SAFETY GLAZING	
GL4R	1" LOW-E INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL5	1" INSULATED SPANDREL GLAZING	

WINDOW TYPES

1/2" = 1'-0"

GENERAL DOOR NOTES

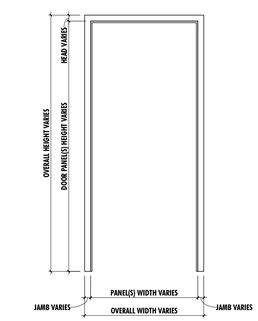
NOTE #	NOTE
1	CONTRACTOR SHALL FIELD VERIFY ALL OPENINGS/MODIFIED OPENINGS PRIOR TO FABRICATION OF DOORS AND FRAMES.
2	DETAILS MAY VARY AT EACH DOOR. VERIFY EACH CONDITION IN FIELD.
3	SEE PARTITION SCHEDULE, FLOOR PLAN, AND STRUCTURAL DRAWINGS FOR CONSTRUCTION OF WALLS AND PARTITIONS.
4	ALL DOORS SHALL BE SET WITHIN OPENINGS TO ENSURE ADA APPROACH COMPLIANCE AS INDICATED ON SHEET A0.3.
5	MOISTURE RESISTANT GYPSUM WALL BOARD SHALL BE UTILIZED IN ALL AREAS WHERE GYPSUM WALL BOARD IS TO BE DIRECTLY ADHERED TO CONCRETE OR MASONRY SURFACES IN INTERIOR APPLICATIONS. SUBSTRATE SHALL BE CLEANED AS REQUIRED AND FREE OF DUST, DEBRIS, AND MOISTURE PRIOR TO ADHESION AND FINISHING.
6	AT WALLS WITH SOUND ATTENUATION BLANKETS, CONTRACTOR SHALL SEAL DOOR FRAMES, GLAZED OPENING FRAMES, INTERSECTIONS, AND OTHER PENETRATIONS WITH ACOUSTICAL SEALANT.



1. SEE DOOR SCHEDULE FOR ACTUAL PANEL DIMENSIONS.
2. DIMENSIONS FOR GLAZING INDICATED SHALL CONSTITUTE THE FULL GLAZING WIDTH.
3. SEE STOREFRONT ELEVATIONS FOR CURTAIN WALL / STOREFRONT ENTRANCE

DOOR PANEL TYPES

1/2" = 1'-0"



HM ST	HOLLOW METAL STANDARD FRAME

1.) SEE DOOR SCHEDULE FOR FRAME DIMENSION VARIABLES

FRAME TYPES

1/2" = 1'-0"

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. LICENSE NUMBER: #RA405311 EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: DOOR/WINDOW SCHEDULE & TYPES

SHEET NUMBER: A600

7/29/2021 2:09:03 PM

HW SET #	DOOR #	QTY	ITEM	DESCRIPTION	COMMENTS
Set 1	**Typical Exterior Single Door W/ Panic Hardware & Card Reader**				
	Doors: S02A, S03A				
		1	Continuous Hinge	Electrified	
		1	Mortise Exit Device	Electric Latch Retraction Option, ANSI 08	exterior cylinder locks/unlocks exterior trim)
		1	Surface Mount Closer	Compression Stop	
		1	Metal Protective Trim Unit		
		1	Set Perimeter Weatherstripping		
		1	Door Sweep w/Drip Cap		
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
		1	Card Reader		
		1	Transformer: Electromechanical Lockset		Locate in accessible location above ceiling
	Operations Narrative: Exterior lever always locked; Latchbolt retracted by exterior card reader, to allow entry from pull side of door. Panic bar on push side of door shall always retract latch of electrified exit device providing free egress from space. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 2	**Exterior Single Door W/ Panic Hardware, Card Reader, & Video Door Bell**				
	Doors: S01A				
		1	Continuous Hinge	Electrified	
		1	Mortise Exit Device	Electric Latch Retraction Option, ANSI 08	exterior cylinder locks/unlocks exterior trim)
		1	Surface Mount Closer	Compression Stop	
		1	Set Perimeter Weatherstripping		
		1	Card Reader		
		1	Transformer: Electromechanical Lockset		Locate in accessible location above ceiling
		1	Door Sweep w/Drip Cap		
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
	Operations Narrative: Exterior lever always locked; Latchbolt retracted by exterior card reader, to allow entry from pull side of door. Panic bar on push side of door shall always retract latch of electrified exit device providing free egress from space. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 3	**Exterior Double Door W/ Panic Hardware, Card Reader, & Video Door Bell**				
	Doors: 101A				
		2	Continuous Hinge		
		2	Concealed Vertical Rod Exit Device	Less Bottom Rod	
		2	Fixed Pulls		
		2	Surface Closers	Compression Stop	
		1	Set Perimeter Weatherstripping		
		1	Meeting Stile Gasketing		
		1	Card Reader	Electric Strike, relayed both door head strikes & associated accessories	
		1	Transformer: Electric Strike		Locate in accessible location above ceiling
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
	Operations Narrative: Both door leafs strikes to be retracted by single card reader/or access provided by remote video doorbell buzzer call button. Free exit at all times by depressing interior push bars on either exit devices. Electrified hardware shall be fail secure, keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 4	**Exterior Double Door W/ Panic Hardware & Card Reader**				
	Doors: 103B				
		2	Continuous Hinge		
		1	Concealed Vertical Rod Exit Device		No exterior trim on inactive leaf
		1	Concealed Vertical Rod Exit Device	Less Bottom Rod	Fixed exterior pull on active leaf
		2	Surface Closers		
		1	Perimeter Weatherstripping		
		1	Pair of Meeting Stile Weatherstripping	Fastened	
		2	Door sweep w/drip cap		
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
		1	Card Reader	Electric Strike, in head on active leaf	
		1	Transformer: Electromechanical Lockset		Locate in accessible location above ceiling
	Operations Narrative: Exterior lever always locked; strike retracted by exterior card reader, to allow entry from pull side of door. Panic bar on push side of door shall always retract latch of exit device providing free egress from space. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 5	**Exterior Roof Top Single Door W/ Panic Hardware**				
	Doors: S04B				
		3	Butt Hinges		
		1	Mortise Lockset	F01 Passage Function	
		1	Deadbolt, F16 Deadlock		
		1	Surface Closer	with hold open	
		1	Metal Protective Trim Unit		
		1	Set Perimeter Weatherstripping		
		1	Door Sweep with Drip Cap		
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
Set 6	**Exterior Courtyard Double Door**				
	Doors: 218A, 218B, 218C				
		2	Continuous Hinge		
		1	Mortise Lockset	F01 Passage Function, on active leaf	
		1	Deadbolt	F16 Deadlock, on active leaf	
		2	Surface Closer with hold-open		
		1	Concealed Manual Flush Bolts	on inactive leaf	
		1	Double Dummy Trim	on inactive leaf	
		1	Set Perimeter Weatherstripping		
		1	Pair of Meeting Stile Weatherstripping	Fastened	
		1	ADA Accessible Aluminum Threshold	Thermally-Improved	
		1	Door Sweep w/Drip Cap		
Set 7	**Interior Free Passage Single Door**				
	Doors: 102A*, 224B, 202A				
		3	Butt Hinges		
		1	Mortise Lockset	F01 Passage Function	
		1	Wall-Mounted Stop	Not Provided for 102A	
		1	Surface Closer	With Hold Open	
		2	Kick Plate	1 1/2" LDW	
		3	Silencers		

Set 8	**Interior Free Passage Single Door W/ Panic Hardware**				
	Doors: 211A, 225A, 201B				
		3	Butt Hinges		
		1	Mortise Exit Device	Passage Function (ANSI F01)	
		1	Wall-Mounted Stop		
		1	Surface Closer	with hold open	
		2	Kick Plate	1 1/2" LDW	
		3	Silencers		
Set 9	**Interior Non-Latching Single Door**				
	Doors: 113C				
		3	Butt Hinges		
		1	Push Plate		
		1	Fixed Pull		
		1	Closer		
		2	Kick Plate, 1 ½" LDW		
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
Set 10	**Janitor Closet Double Door**				
	Doors: 205A				
		6	Butt Hinges		
		1	Manual Flush Bolts on inactive leaf		
		1	Dust-Proof Strike		
		1	Mortise Lockset	Passage Function (ANSI F01)	On Active Leaf
		2	Lever Door Holder		
		2	Armor Plates	1 ½" LDW, push side	
		2	Silencers		
Set 11	**Typical Interior Free Passage Single Door, Fire Rated – 20 Min.**				
	Doors: 212A, 213A, 214A, 215A, 216A, 217A, 220A, 222A, 222B, 230A				
		3	Butt Hinges		
		1	Mortise Latchset	Passage Function (ANSI F01)	
		1	Surface Mount Closer		
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
Set 12	**Interior Free Passage Single Door, W/ Panic Hardware & 20-Min. Fire Rated**				
	Doors: 207A				
		3	Butt Hinges		
		1	Mortise Exit Device	Passage Function (ANSI F01)	
		1	Closer		
		2	Kick Plate	1 1/2" LDW	
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
Set 13	**Interior Double Door, W/ Panic Hardware & 20-Min Fire Rated**				
	Doors: 201A				
		6	Butt Hinges		
		1	Automatic Flush Bolt, inactive leaf		
		1	Mortise Exit Device	Passage Function (ANSI F01)	Exposed Vertical rode less bottom rod, on active leaf
		2	Surface Closer		
		4	Kick Plate	1-1/2" LDW	
		2	Wall-Mounted Stop		
		1	Perimeter Gasketing		
		1	Meeting Stile Gasketing		
Set 14	**Interior Free Passage Single Door, W/ Panic Hardware & 45-Min. Fire Rated**				
	Doors: 112A, 113A, 502B, 503B, 219B, 200.3A*,501B, 502C*, 503C				
		3	Butt Hinges		
		1	Mortise Exit Device	Passage Function (ANSI F01)	
		1	Closer		
		2	Kick Plate	1-1/2" LDW	
		1	Wall-Mounted Stop		
		1	Floor-Mounted Stop		*provide where noted with asterisk
		1	Perimeter Gasketing		
	NOTE: 113A & 200.3A - Not 45-Min. Fire Rated. Gasketing and Closer still provided.				
Set 15	**Typical Interior Free Passage Single Door, Fire Rated – 45 Min.**				
	Doors: 115A				
		3	Butt Hinges		
		1	Mortise Lockset	Passage Function (ANSI F01)	
		1	Closer		
		2	Kick Plate	1 ½" LDW	
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
Set 16	**Typical Single Occupant Toilet Room Door**				
	Doors: 108A, 110A, 111A, 223A				
		3	Butt Hinges		
		1	Mortise Lockset, F02 Privacy function, with Occupancy Indicator		
		2	Kick Plate, 1 ½" LDW,		
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
		1	Door Sweep		
		1	Coat Hook		

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: DOOR HARDWARE
SHEET NUMBER: A601

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Set 17	**Typical Single Occupant Toilet Room Door, 20-min Fire Rated**				
	Doors: 206A, 208A, 209A, 228A				
		3	Butt Hinges		
		1	Mortise Lockset, F02 Privacy function, with Occupancy Indicator		
		1	Surface Closer		
		1	Kick Plate, 1 ½" LDW, on push side of door		
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
		1	Door Sweep		
		1	Coat Hook		
Set 18	**Conference Room Single Door, 20-min Fire Rated**				
	Door: 226A				
		3	Butt Hinges		
		1	Mortise Lockset	F05 Classroom Function	
		1	Surface Closer		
		1	Wall-Mounted Stop		
		1	Perimeter Gasketing		
Set 19	**Typical Single Interior Door W/ Card Reader**				
	Doors: 104A, 101C, 229A				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Electromechanical Mortise Lockset	F30 Storeroom function	
		1	Surface Closer		
		3	Silencers		
		1	Wall-Mounted Stop		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on non-secure side, secure side to provide free egress at all times. Latch bolt retracted by card reader. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 20	**Typical Single Interior Door W/ Card Reader & 20 Min. Fire Rated**				
	Doors: 224A				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Electromechanical Mortise Lockset	F30 Storeroom function	
		1	Surface Closer		
		1	Perimeter Gasketing		
		1	Floor-Mounted Stop		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on non-secure side, secure side to provide free egress at all times. Latch bolt retracted by card reader. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 21	**Typical Single Interior Door W/ Card Reader & 45 Min. Fire Rated**				
	Doors: 103A				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Electromechanical Mortise Lockset	F30 Storeroom function	
		1	Surface Closer		
		1	Perimeter Gasketing		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on non-secure side, secure side to provide free egress at all times. Latch bolt retracted by card reader. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 22	**Typical Interior Single Door W/ Panic Hardware & Card Reader**				
	Doors: 113B, 114A, 112B, 504A				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Mortise Exit Device	Electric Latch Retraction Option	
		1	Surface Closer		
		3	Silencers		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on pull side, panic bar (push side) to provide free egress at all times. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key				
Set 23	**Typical Interior Single Door W/ Panic Hardware, Card Reader, & 45 Min. Fire Rated**				
	Doors: 116A, 101B*				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Mortise Exit Device	Electric Latch Retraction Option	
		1	Surface Closer		
		1	Wall-Mounted Stop	*Provide floor mounted stop in lieu of wall mounted stop.	
		1	Perimeter Gasketing		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on pull side, panic bar (push side) to provide free egress at all times. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail secure keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key				
Set 24	**Typical Interior Single Door W/ Push to Enter, & 45 Min. Fire Rated**				
	Doors: 210A, 219A				
		2	Butt Hinges		
		1	Electrified Hinge		
		1	Mortise Exit Device	Electric Latch Retraction Option	
		1	Surface Closer		
		1	Wall-Mounted Stop		
		1	Door Bottom Gasket		
		1	Perimeter Gasketing		
		1	Card Readers and associated accessories		
		1	Transformer: Electromechanical Lockset		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by push to enter button on Corridor 211 side, Pole Closet side to provide free egress at all times. Electrified hardware shall return to locked state automatically. Electrified hardware shall be fail safe in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				
Set 25	**Typical Interior Double Storage Door W/ Card Reader**				
	Doors: 227A				
		5	Butt Hinges		
		1	Electrified Hinge		
		1	Electromechanical Mortise Lockset	F30 Storeroom Function	On active leaf *No trim on inactive leaf
		1	Concealed Automatic Flush Bolts		Top & Bottom on inactive leaf
		2	Surface Closer w/Hold Open		
		1	Dust Proof Strike		
		1	Closer Coordinator		
		1	Full Height Metal Astragal		
		2	Silencers		
		1	Card Reader w/Electric Latch		
		1	Transformer: Electric Latch		locate in accessible location above ceiling.
	Operations Narrative: Door to be accessed by card reader on pull side. Card reader shall activate/deactivate electrified hardware of active leaf to allow entry from pull side of door. Lever on push side of active leaf shall retract latch of electrified hardware at all times providing free egress from space. Electrified hardware shall be fail secure. keeping lockset locked in the event of a power outage. Electrified hardware shall be overridden by use of manual key.				

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CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088

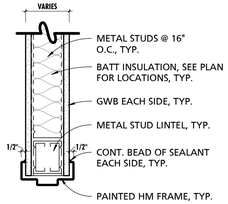
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: DOOR HARDWARE

SHEET NUMBER: A602

7/29/2021 2:09:06 PM



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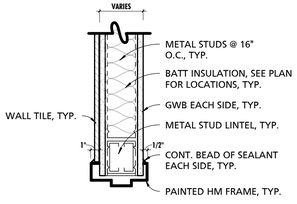

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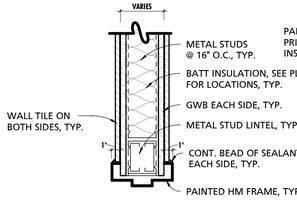

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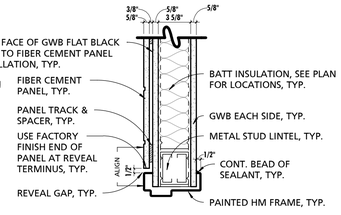

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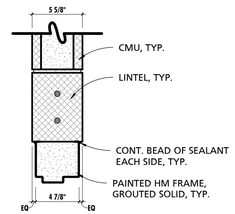

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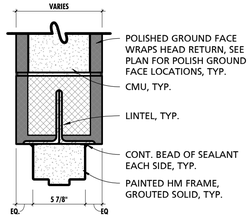

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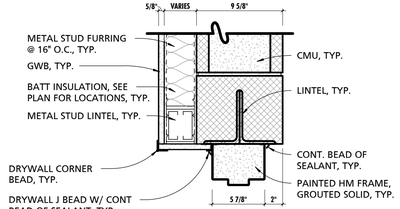

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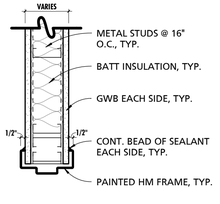

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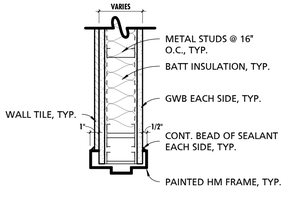

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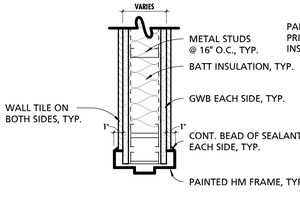

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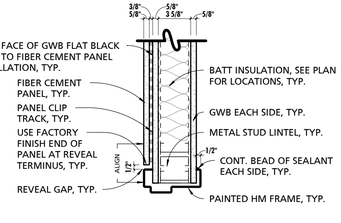

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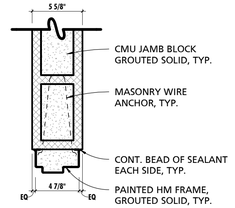

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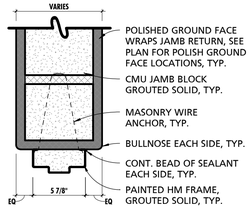

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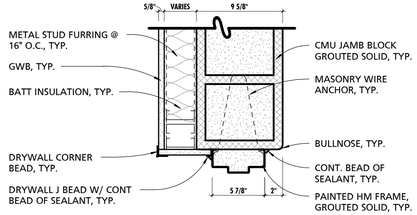
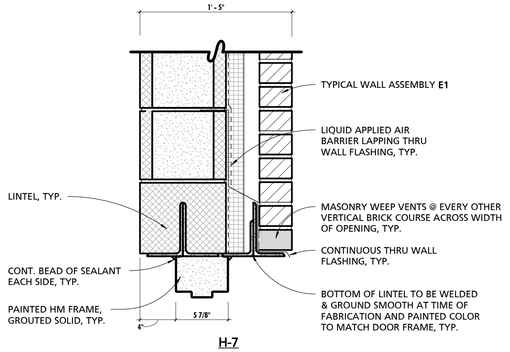


J-6

1 INTERIOR DOOR HEAD & JAMB DETAILS

1 1/2" = 1'-0"



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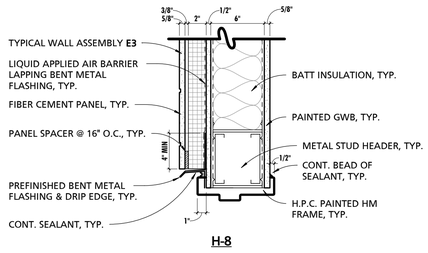

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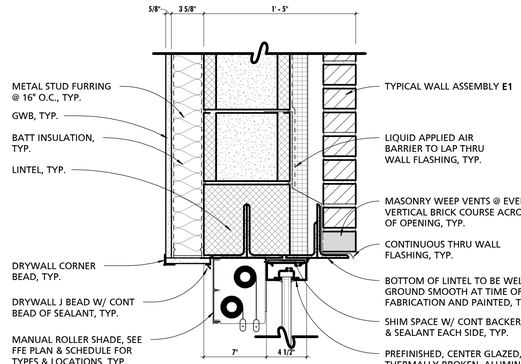
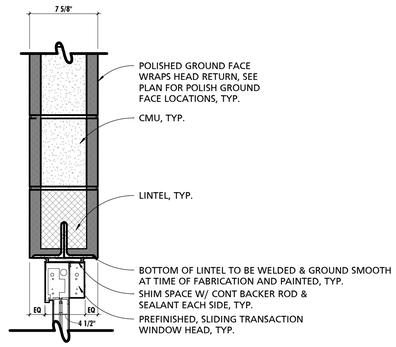


SW-H1



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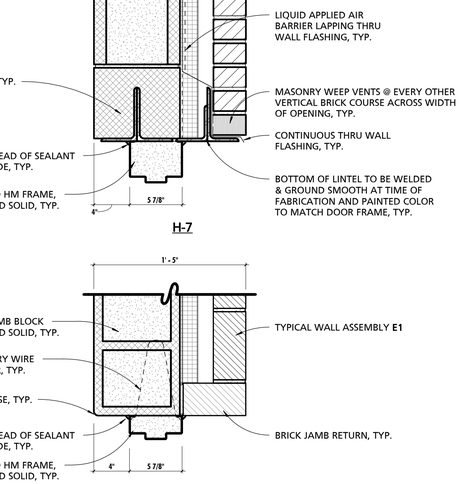

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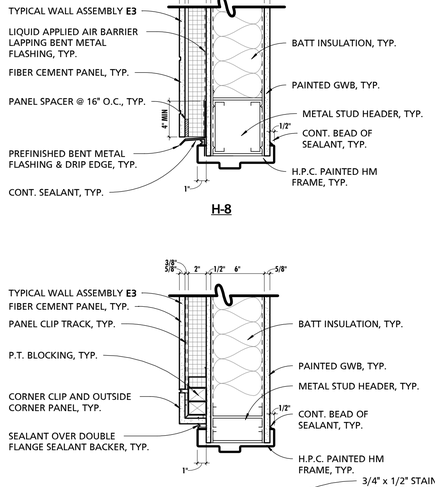

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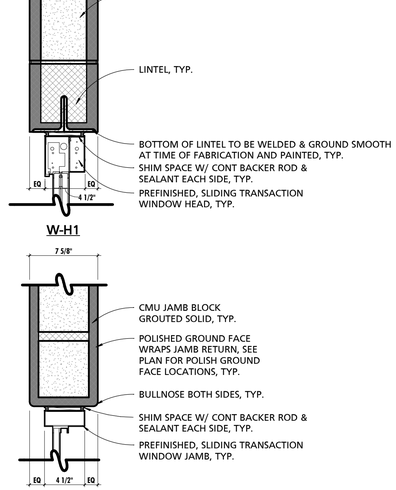
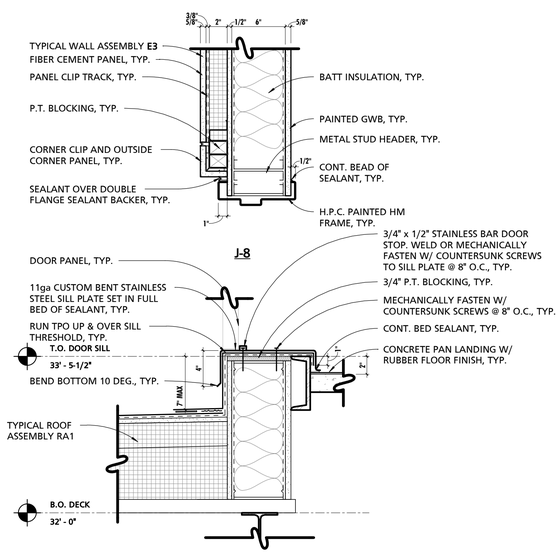


W-J1

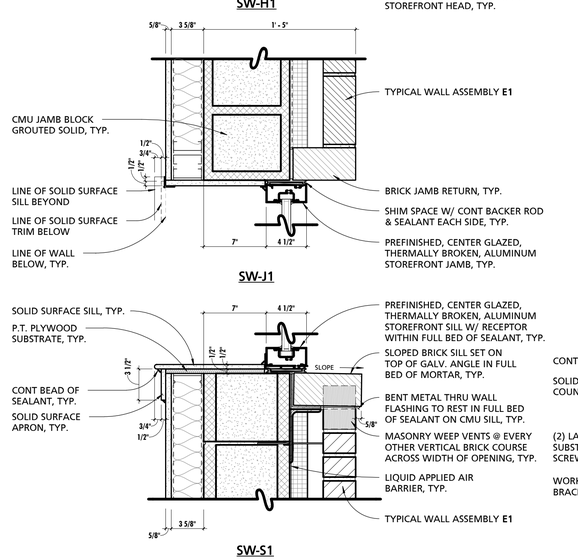
S-1



S-2

2 EXTERIOR DOOR HEAD, JAMB & SILL DETAILS

1 1/2" = 1'-0"



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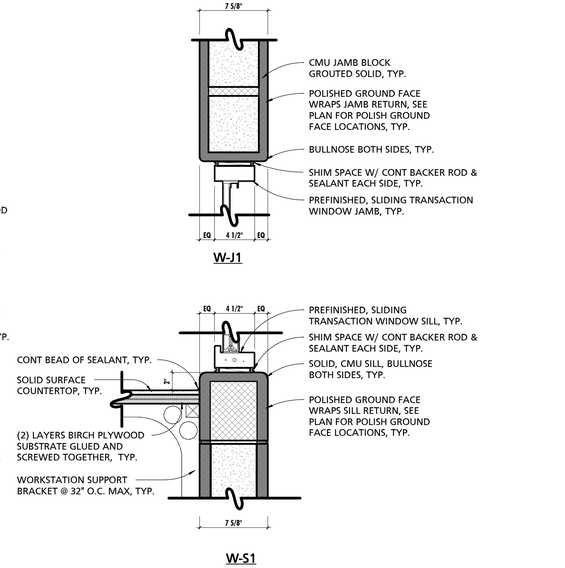

W-S1

3 WINDOW HEAD, JAMB & SILL DETAILS

1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

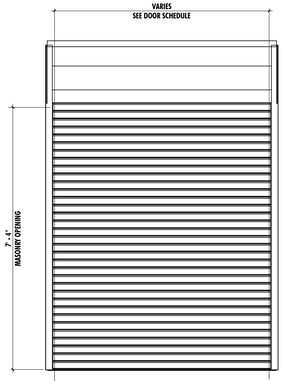
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

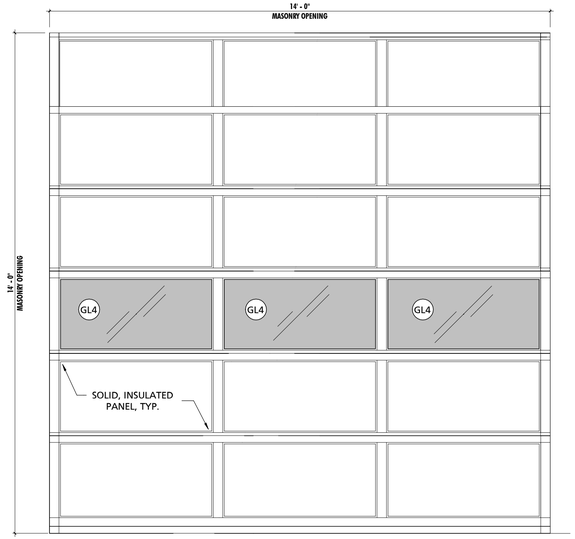
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: DOOR & WINDOW DETAILS
SHEET NUMBER: A603

7/20/2021 11:43:54 AM

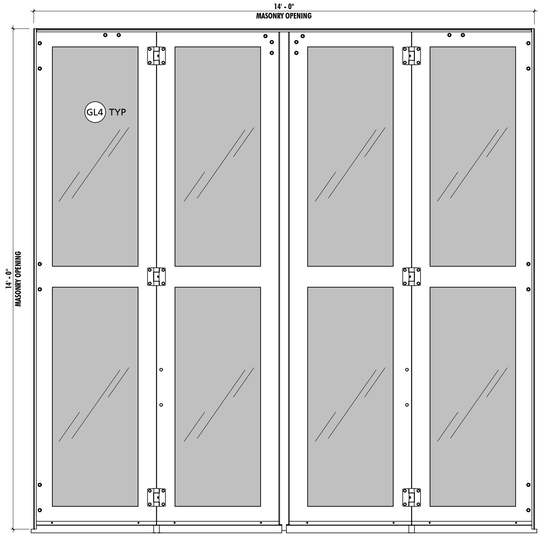


OVERHEAD COILING DOOR

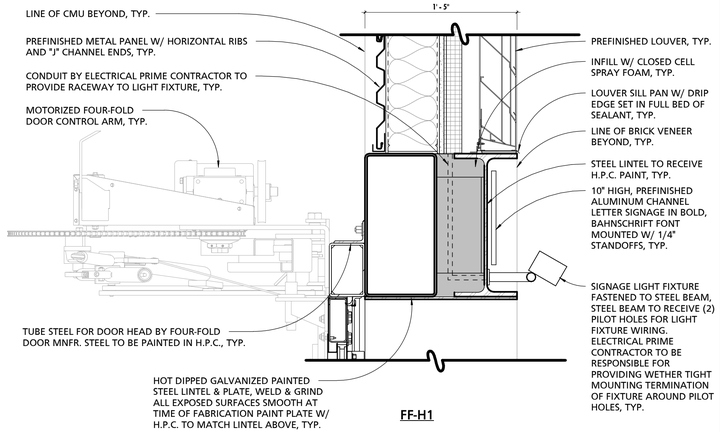


INSULATED OVERHEAD SECTIONAL DOOR

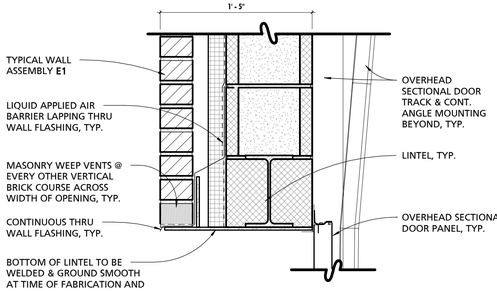
OVERHEAD DOOR TYPES

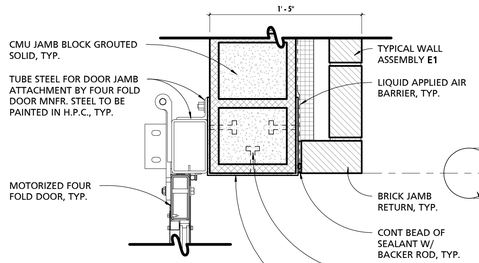


INSULATED FOUR-FOLD DOOR PANEL



FF-H1





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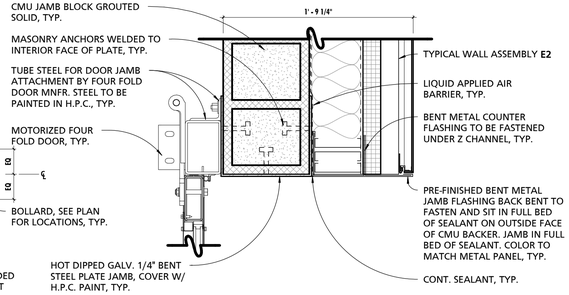

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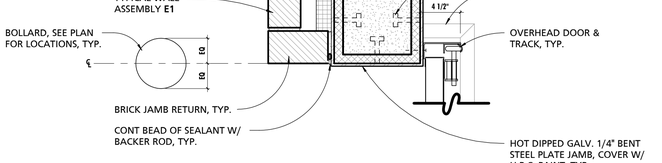
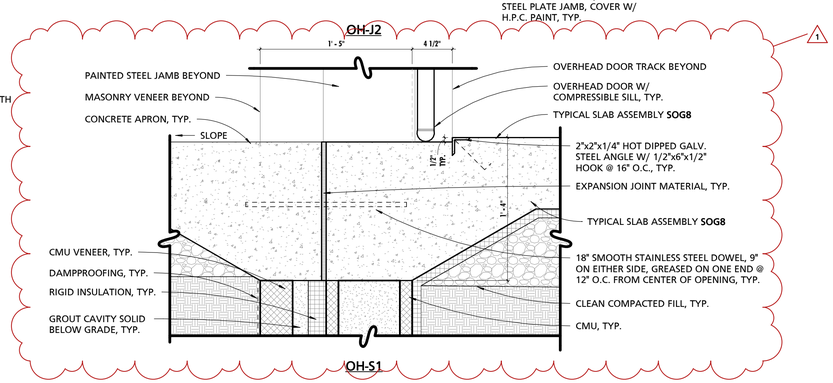


OH-H1

OH-J1



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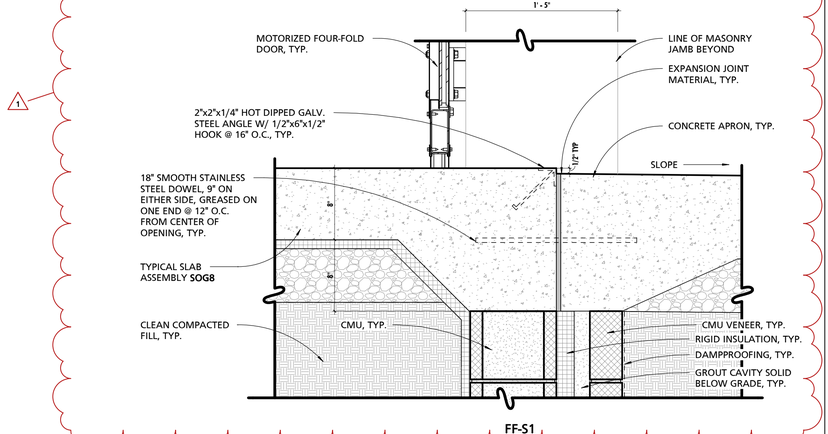

FF-S1

1 INTERIOR OVERHEAD COILING DOOR DETAILS
1 1/2" = 1'-0"

2 OVERHEAD SECTIONAL DOOR DETAILS
1 1/2" = 1'-0"

3 FOUR-FOLD DOOR DETAILS
1 1/2" = 1'-0"

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EXPIRATION DATE: 6-30-2023

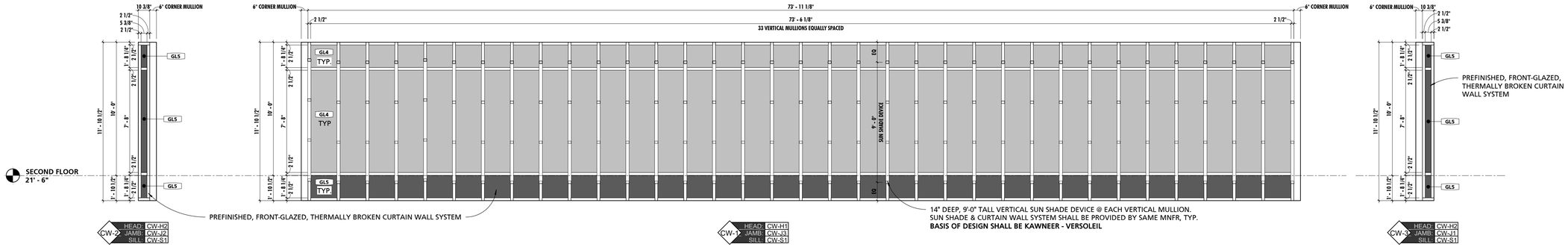
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

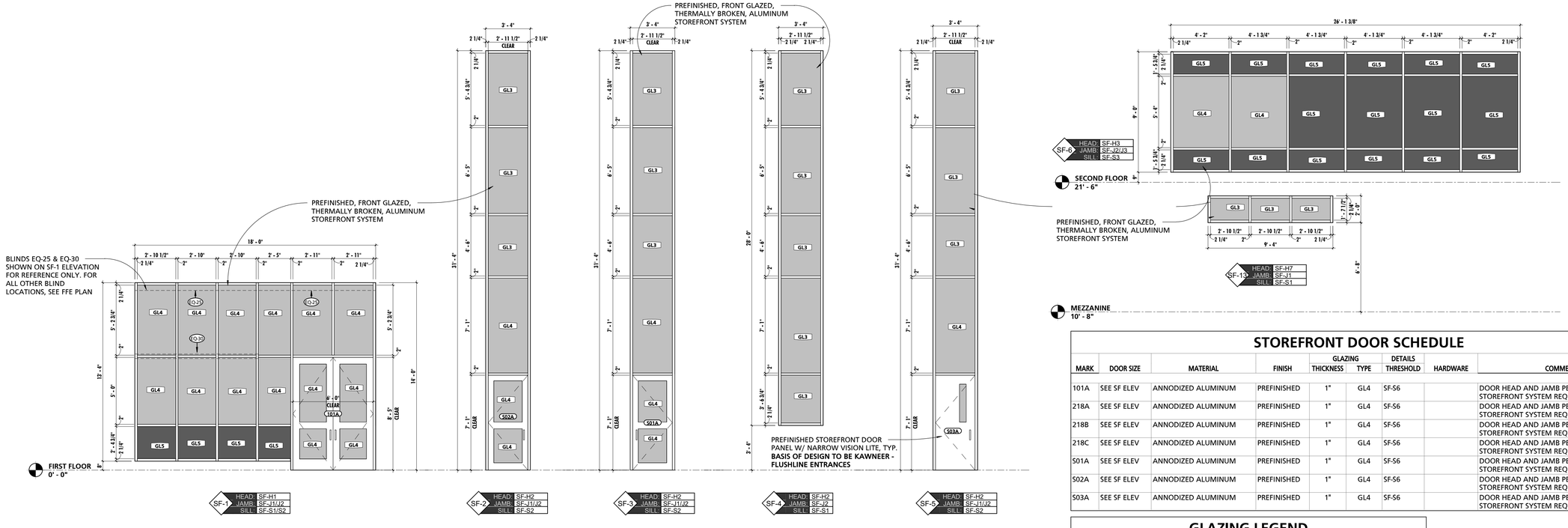
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	7/29/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FOUR-FOLD/OVERHEAD DOOR DETAILS
SHEET NUMBER: A604

7/29/2021 2:09:10 PM



1 EXTERIOR CURTAIN WALL ELEVATIONS

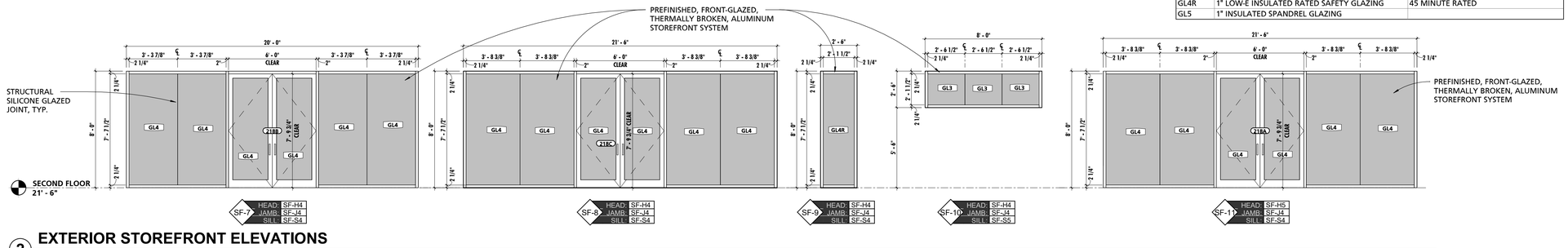


STOREFRONT DOOR SCHEDULE

MARK	DOOR SIZE	MATERIAL	FINISH	GLAZING THICKNESS	GLAZING TYPE	DETAILS THRESHOLD	DETAILS HARDWARE	COMMENTS
101A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218B	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218C	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S01A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S02A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S03A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS

GLAZING LEGEND

MARK	DESCRIPTION	COMMENTS
GL1	1/4" CLEAR SAFETY GLAZING	
GL1R	5/16" CLEAR RATED SAFETY GLAZING	45 MINUTE RATED/30 MINUTE RATED
GL2	1" INSULATED SAFETY GLAZING	
GL2	1" INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL3	1" LOW-E INSULATED GLAZING	
GL4	1" LOW-E INSULATED SAFETY GLAZING	
GL4R	1" LOW-E INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL5	1" INSULATED SPANDREL GLAZING	



2 EXTERIOR STOREFRONT ELEVATIONS

1/4" = 1'-0"

NOTE:
EXTERIOR STOREFRONT DOOR TO BE FACTORY FINISH #1.
EXTERIOR STOREFRONT FRAMES TO BE FACTORY FINISH #2

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

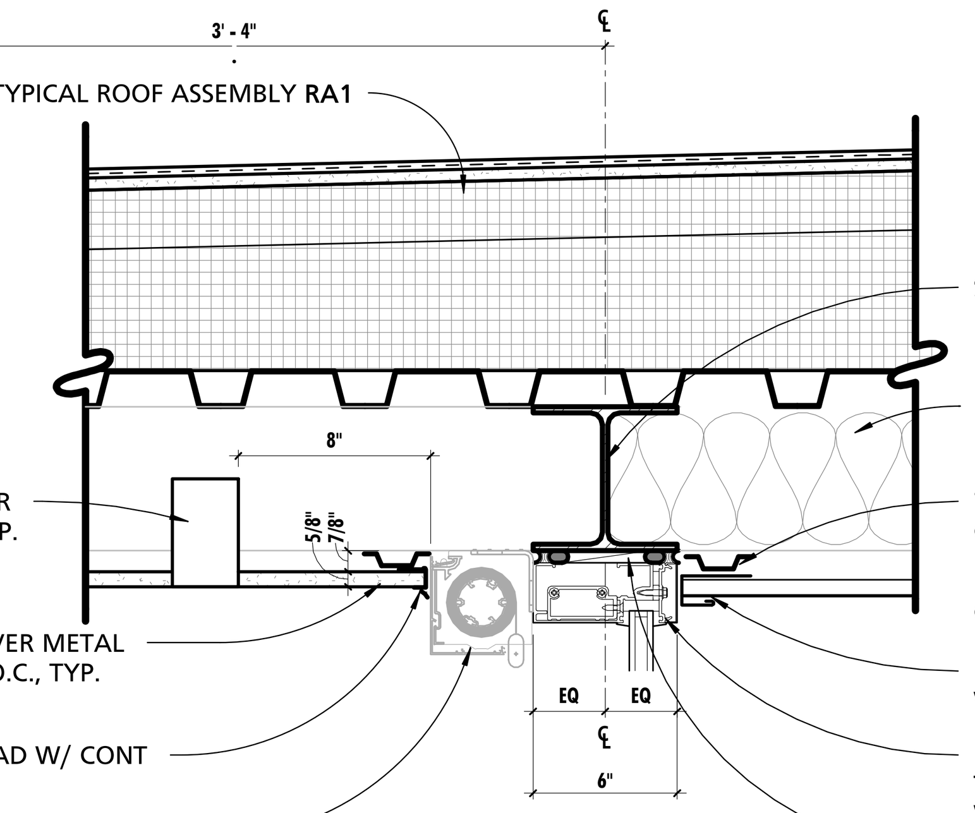
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: EXT CURTAIN WALL & STOREFRONT ELEVATIONS
SHEET NUMBER: A605

7/20/2021 11:44:04 AM



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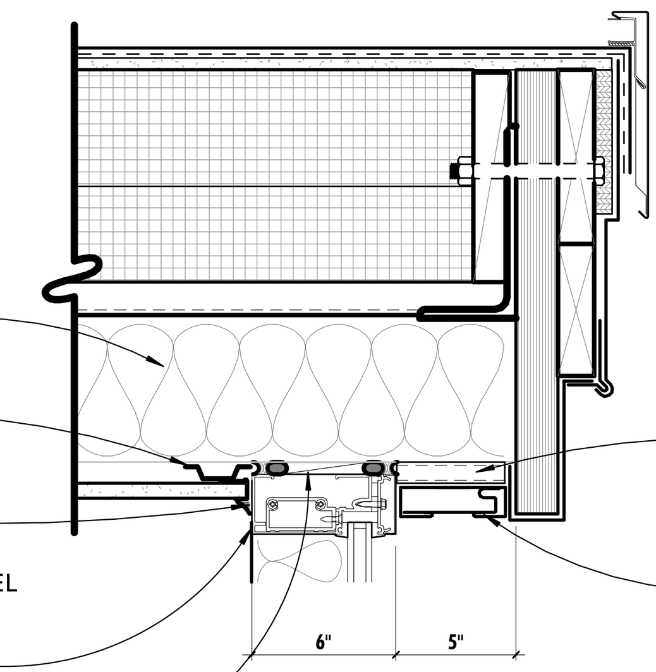
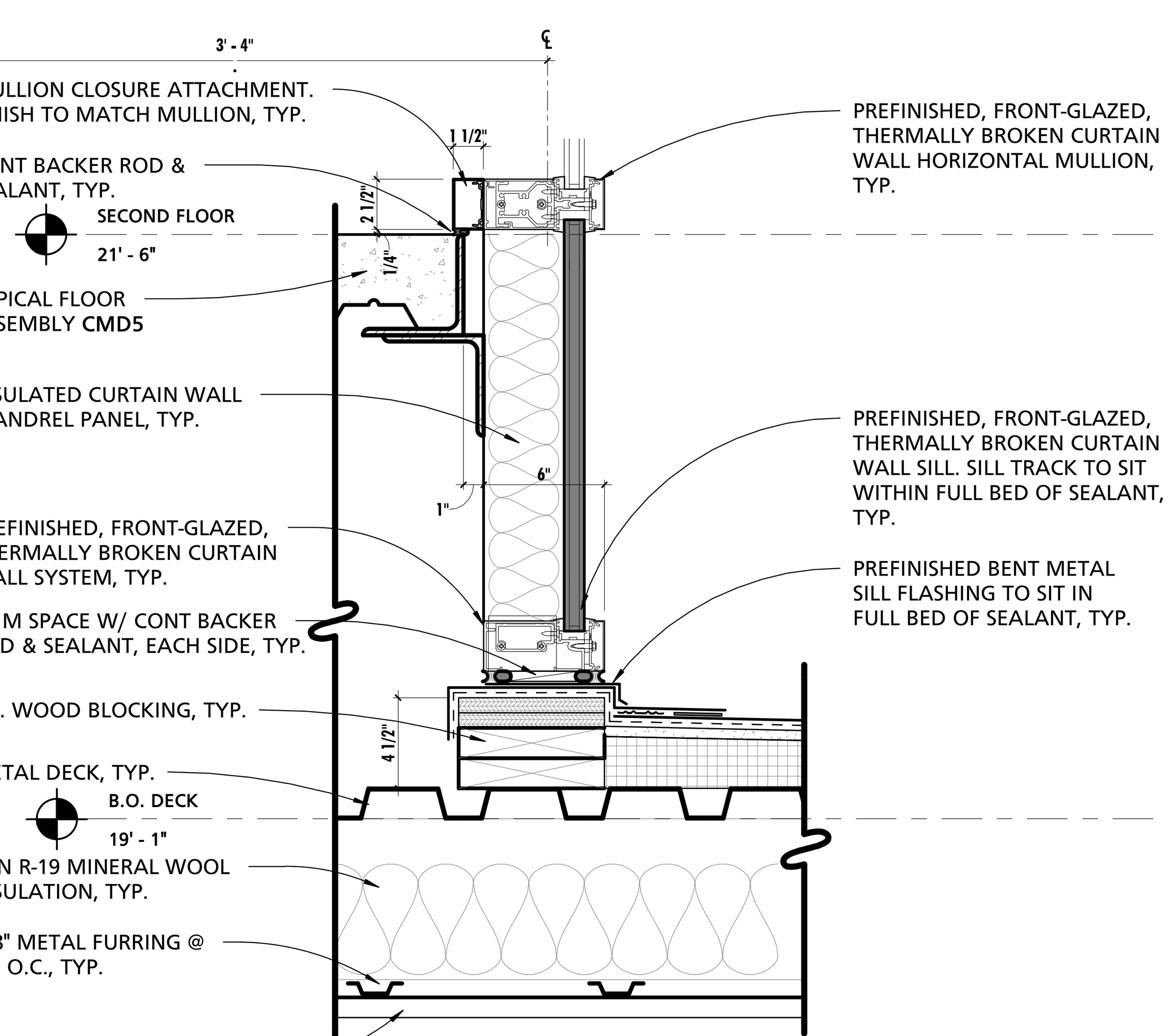


CW-H2

CW-J1
REFERENCE 2/A110

CW-J2
REFERENCE 1/A110

CW-J3
REFERENCE 1 & 2/A110



CW-S1

2 CURTAINWALL DETAILS
1 1/2" = 1'-0"

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SEAL:

REGISTERED ARCHITECT PENNSYLVANIA DAVID A. WOODWARD RA405311

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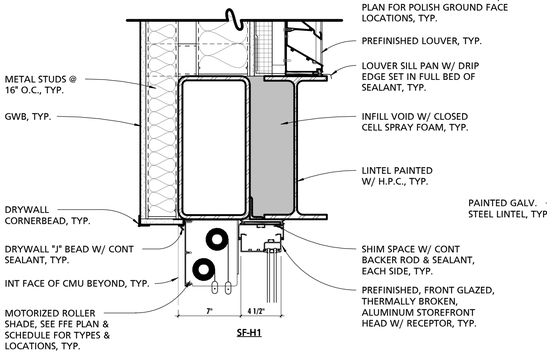
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

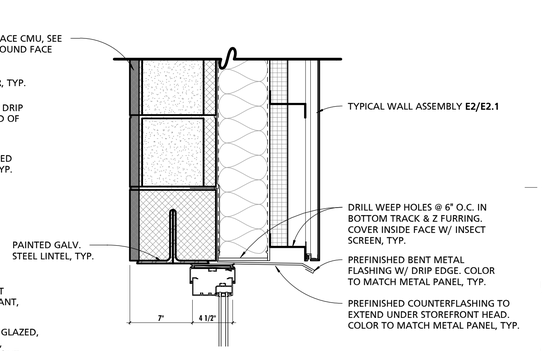
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: EXTERIOR CURTAINWALL DETAILS
SHEET NUMBER: A606

7/20/2021 11:44:06 AM



SF-H1



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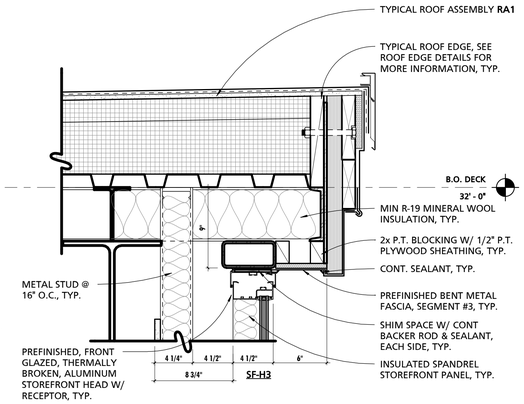

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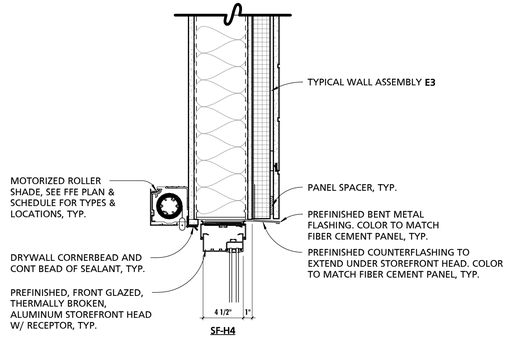

SF-H4

SF-J1

SF-J2

SF-J3

***NOTE:** JAMB DETAIL HAS BEEN MIRRORED TO MATCH ORIENTATION ON FLOOR PLANS FOR CLARITY PURPOSES

SF-J4

SF-S1

SF-S2

SF-S3

SF-S4
REFERENCE 2/A506

1 EXTERIOR STOREFRONT DETAILS

1 1/2" = 1'-0"

MW STUDIOS
ARCHITECTURE + MASTER PLANNING
10839-D PHILADELPHIA RD
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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA WOODWARD RAMSEY

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

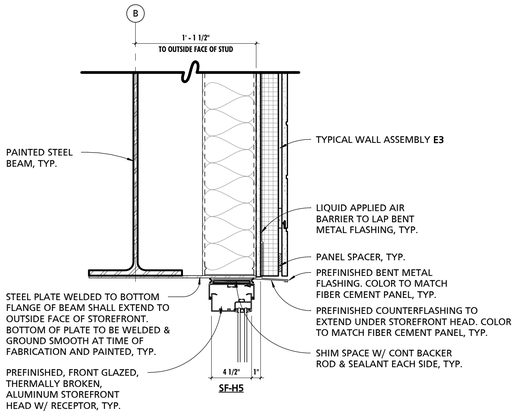
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

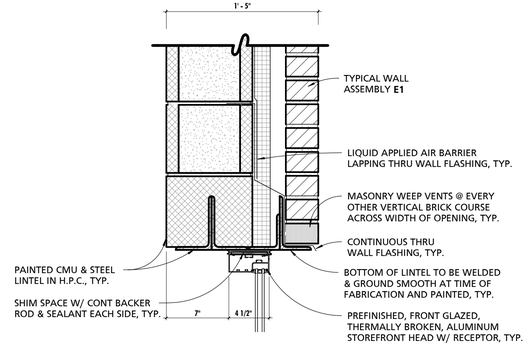
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: EXTERIOR STOREFRONT DETAILS
SHEET NUMBER: A607

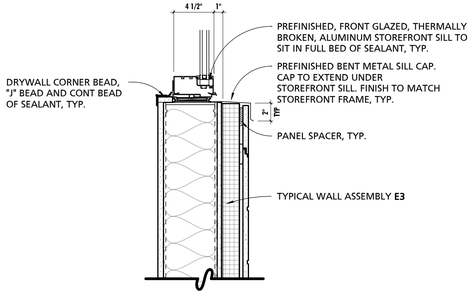
7/20/2021 11:44:08 AM



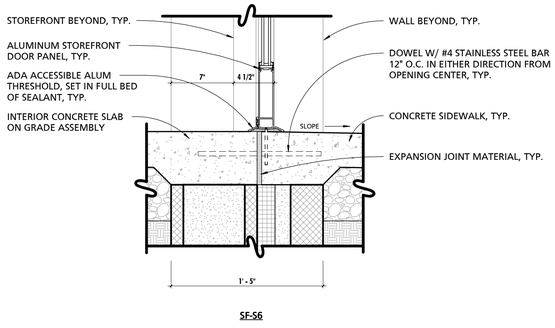
SF-H5



SF-H7



SF-S5



SF-S6

1 STOREFRONT DETAILS

1 1/2" = 1'-0"

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WWW.MWSARCH.COM

SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA MANN WOODWARD RAMSEY

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

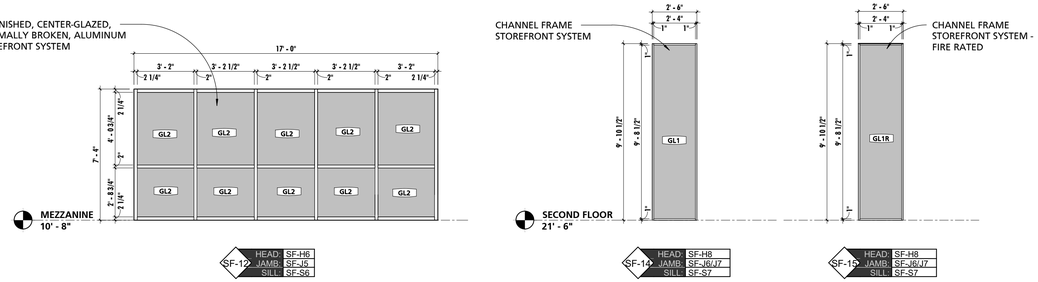
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: EXTERIOR STOREFRONT DETAILS
SHEET NUMBER: A608

7/20/2021 11:44:09 AM



1 INTERIOR STOREFRONT ELEVATIONS

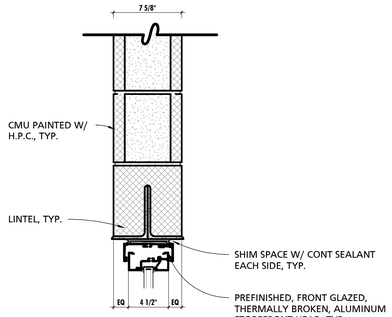
1/4" = 1'-0"

STOREFRONT DOOR SCHEDULE

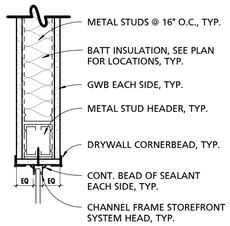
MARK	DOOR SIZE	MATERIAL	FINISH	GLAZING		DETAILS		COMMENTS
				THICKNESS	TYPE	THRESHOLD	HARDWARE	
101A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218B	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
218C	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S01A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S02A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS
S03A	SEE SF ELEV	ANNODIZED ALUMINUM	PREFINISHED	1"	GL4	SF-S6		DOOR HEAD AND JAMB PER MANUFACTURER'S STOREFRONT SYSTEM REQUIREMENTS

GLAZING LEGEND

MARK	DESCRIPTION	COMMENTS
GL1	1/4" CLEAR SAFETY GLAZING	
GL1R	5/16" CLEAR RATED SAFETY GLAZING	45 MINUTE RATED/30 MINUTE RATED
GL2	1" INSULATED SAFETY GLAZING	
GL2	1" INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL3	1" LOW-E INSULATED GLAZING	
GL4	1" LOW-E INSULATED SAFETY GLAZING	
GL4R	1" LOW-E INSULATED RATED SAFETY GLAZING	45 MINUTE RATED
GL5	1" INSULATED SPANDREL GLAZING	



SF-H6



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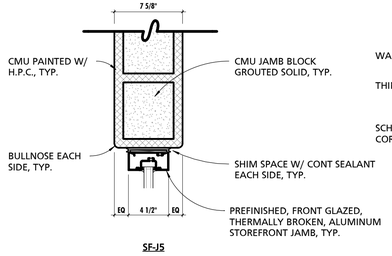
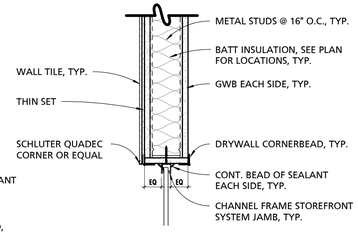
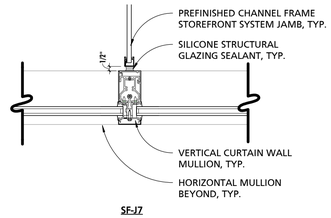


SF-J5



SF-J6



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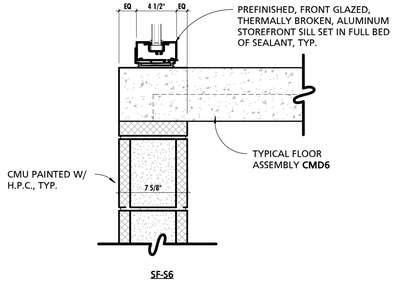
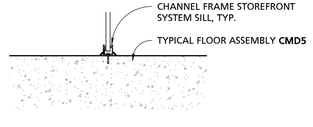


SF-S6



SF-S7

2 INTERIOR STOREFRONT DETAILS

1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021

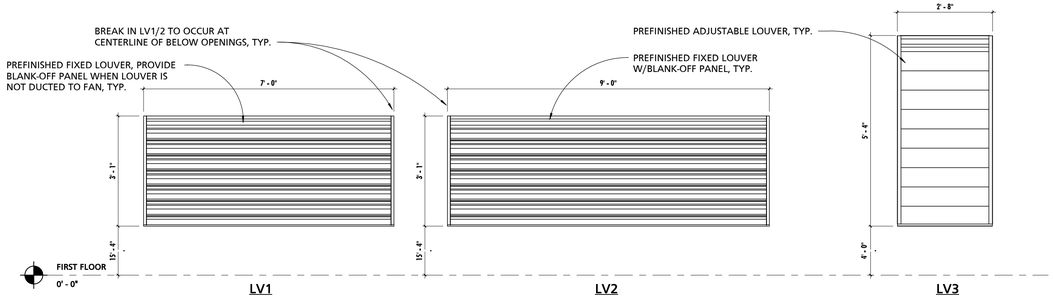
DRAWING TITLE: INTERIOR STOREFRONT ELEVATIONS & DETAILS

SHEET NUMBER: A609

7/20/2021 11:44:13 AM

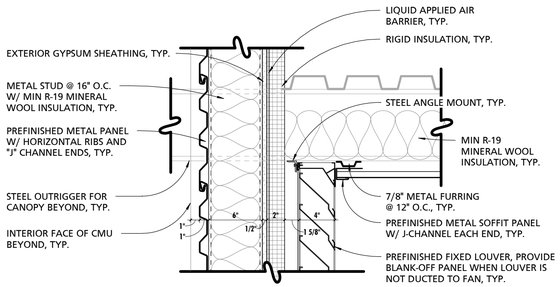
LOUVER SCHEDULE

TYPE MARK	OPERATION	SIZE			HEAD	JAMB	SILL	COMMENTS
		WIDTH	HEIGHT	SILL HEIGHT				
LV1	FIXED/ADJUSTABLE	7' - 0"	3' - 1"	15' - 4"	L-H1	L-J1/J2/J3	L-S1	PROVIDED W/ BLANKOFF PANEL WHEN NOT DUCTED TO FAN
LV2	FIXED	9' - 0"	3' - 1"	15' - 4"	L-H2	L-J1/J2/J3	L-S2	PROVIDED W/ BLANKOFF PANEL
LV3	ADJUSTABLE	2' - 8"	5' - 4"	4' - 0"	L-H3	L-J4	L-S3	SEE MEP DRAWINGS FOR MORE INFORMATION

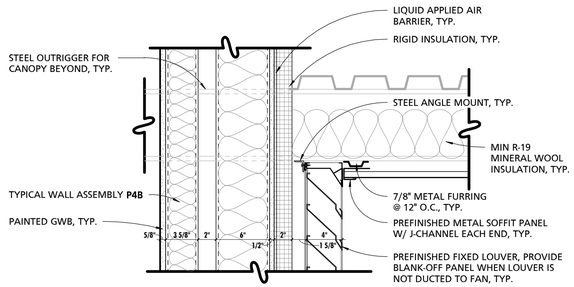


LOUVER TYPES

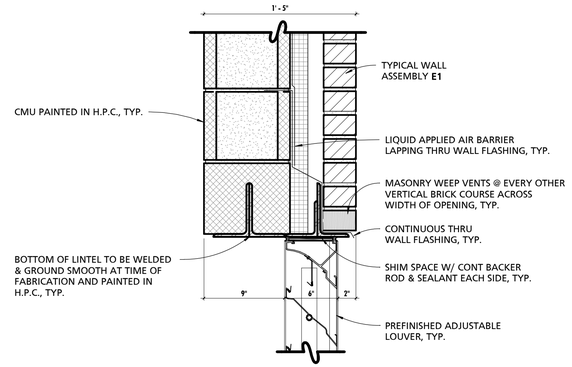
1/2" = 1'-0"



L-H1

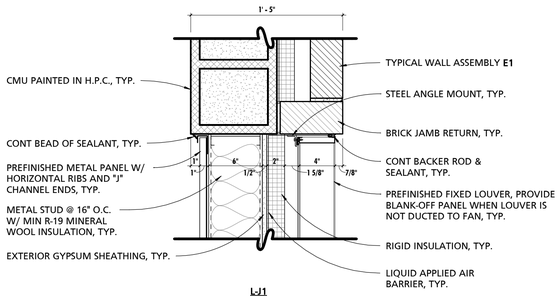


L-H2

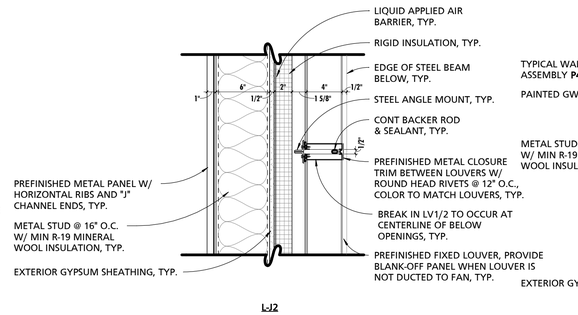


L-H3

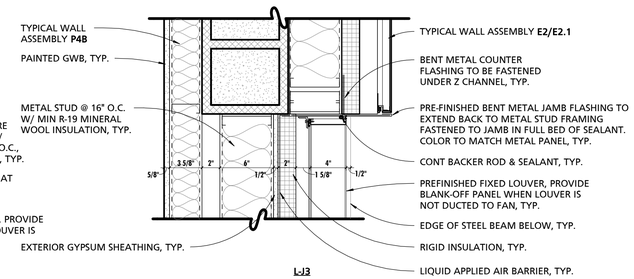
NOTE: REFER TO THIS DETAIL FOR ALL OTHER TYPICAL LOUVER PENETRATIONS THRU WALL ASSEMBLY E1



L-J1



L-J2



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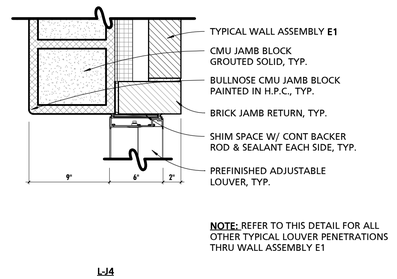
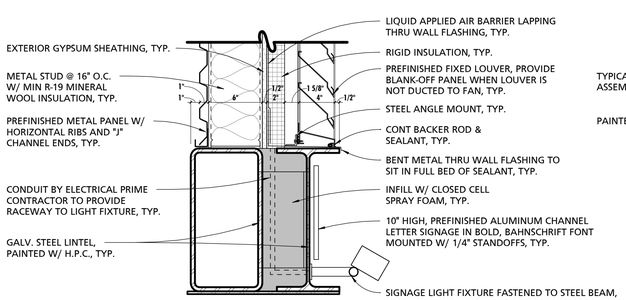
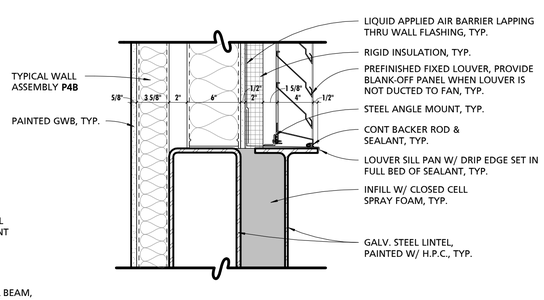


L-J4

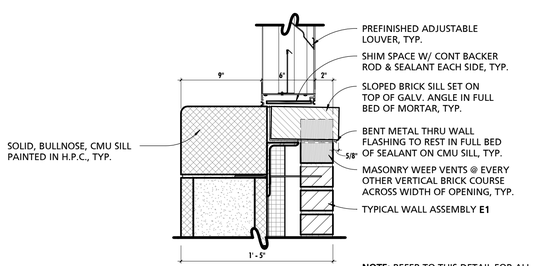
NOTE: REFER TO THIS DETAIL FOR ALL OTHER TYPICAL LOUVER PENETRATIONS THRU WALL ASSEMBLY E1



L-S1



L-S2



L-S3

NOTE: REFER TO THIS DETAIL FOR ALL OTHER TYPICAL LOUVER PENETRATIONS THRU WALL ASSEMBLY E1

1 LOUVER DETAILS

1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

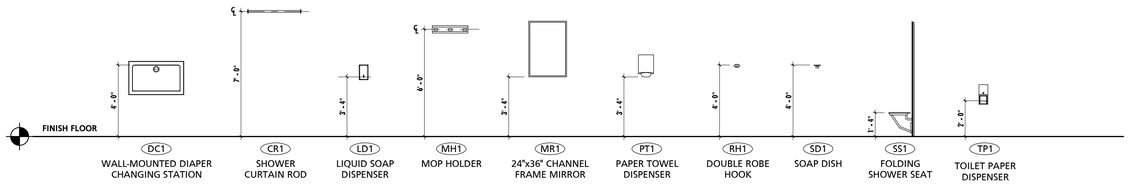
DRAWING TITLE: LOUVER SCHEDULE & DETAILS

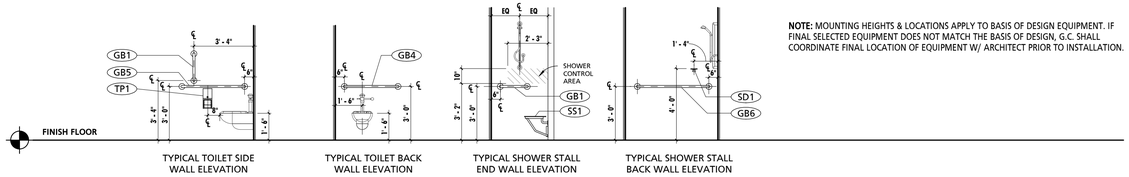
SHEET NUMBER: A610

7/20/2021 11:44:15 AM

SCHEDULE - TOILET ROOM ACCESSORIES

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CR1	HEAVY DUTY SHOWER CURTAIN ROD	AMERICAN SPECIALTIES	1214-2	
GB1	18" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB3	30" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB4+5	36" LONG (BACK) & 48" LONG (SIDE) CORNER TOILET GRAB BARS	AMERICAN SPECIALTIES	3700 SERIES	
GB6	48" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
LD1	VERTICAL WALL MOUNTED SOAP DISPENSER	PK SC DISPENSER	PK SC DISPENSER	SIZE TO MATCH CITY'S EXISTING SOAP PACKETS
MR1	24" x 36" CHANNEL FRAME MIRROR	AMERICAN SPECIALTIES	0600-2436	
PT1	CENTER PULL PAPER TOWEL DISPENSER	SSS TRIPLE S	76114	
RH1	DOUBLE ROBE HOOK	AMERICAN SPECIALTIES	7345	
SD1	RECESSED SOAP DISH	AMERICAN SPECIALTIES	7410	
SS1	RECTANGULAR PHENOLIC FOLD-UP SHOWER SEAT	AMERICAN SPECIALTIES	8203-20	
TP1	WALL MOUNT TOILET TISSUE DISPENSER	OMNI 11-209	OMNI 11-209	



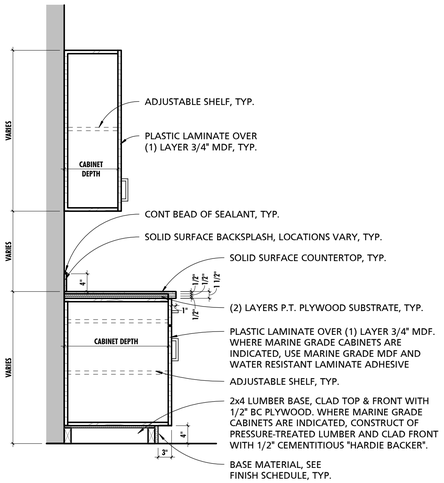


NOTE: MOUNTING HEIGHTS & LOCATIONS APPLY TO BASIS OF DESIGN EQUIPMENT. IF FINAL SELECTED EQUIPMENT DOES NOT MATCH THE BASIS OF DESIGN, G.C. SHALL COORDINATE FINAL LOCATION OF EQUIPMENT W/ ARCHITECT PRIOR TO INSTALLATION.

NOTE: DIMENSIONS BASED ON BASIS-OF-DESIGN PRODUCTS. VERIFY MOUNTING HEIGHTS FOR ALL SUBSTITUTION PRODUCTS.

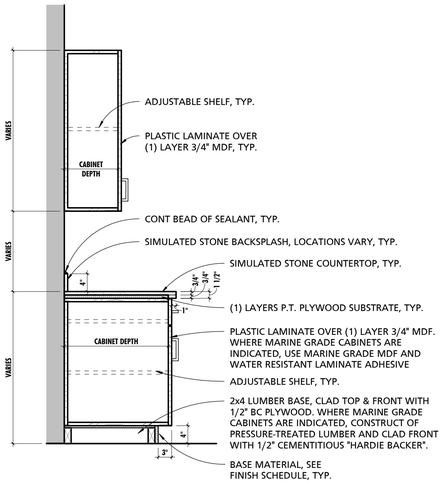
TYPICAL TOILET ACCESSORY MOUNTING HEIGHTS & LOCATIONS

NOT TO SCALE



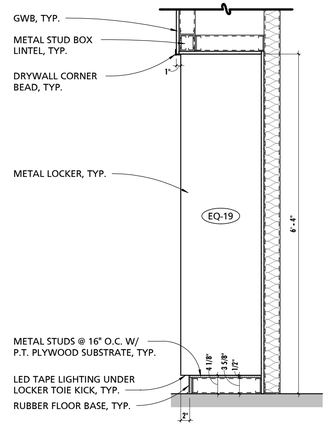
2 TYPICAL CASEWORK W/ SOLID SURFACE COUNTERTOP

3/4" = 1'-0"



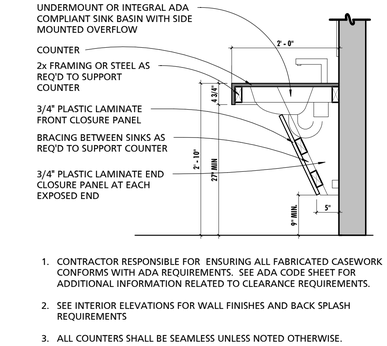
3 TYPICAL CASEWORK W/ SIMULATED STONE COUNTERTOP

3/4" = 1'-0"



4 TYPICAL METAL LOCKER DETAIL

3/4" = 1'-0"



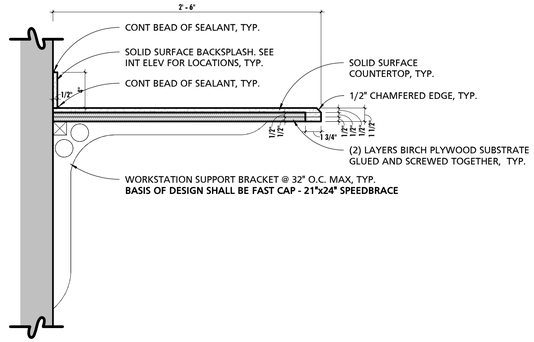
1. CONTRACTOR RESPONSIBLE FOR ENSURING ALL FABRICATED CASEWORK CONFORMS WITH ADA REQUIREMENTS. SEE ADA CODE SHEET FOR ADDITIONAL INFORMATION RELATED TO CLEARANCE REQUIREMENTS.
2. SEE INTERIOR ELEVATIONS FOR WALL FINISHES AND BACK SPLASH REQUIREMENTS
3. ALL COUNTERS SHALL BE SEAMLESS UNLESS NOTED OTHERWISE.

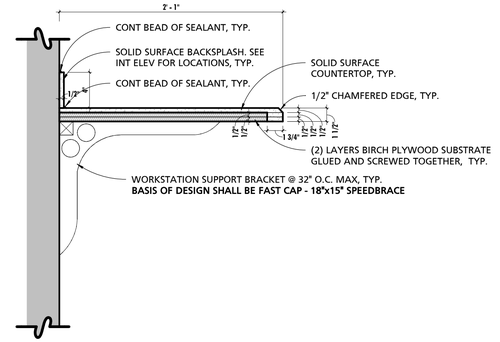
5 TYPICAL LAVATORY DETAIL

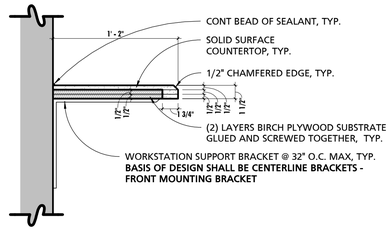
3/4" = 1'-0"

1 TYPICAL SOLID SURFACE COUNTERTOP & SUPPORT BRACKET DETAILS

1 1/2" = 1'-0"







NOTE:

AT STUD WALL LOCATIONS INSTALL CONTINUOUS 2x BLOCKING IN WALL AS REQUIRED TO INSTALL COUNTER SUPPORT. COORDINATE HEIGHT OF BLOCKING WITH HEIGHT OF COUNTER/SUPPORT BRACKET.

AT CMU WALL LOCATIONS, ATTACHMENT POINT SHALL OCCUR WHERE CMU CELLS HAVE BEEN GROUTED SOLID, TYP.

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SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.
LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

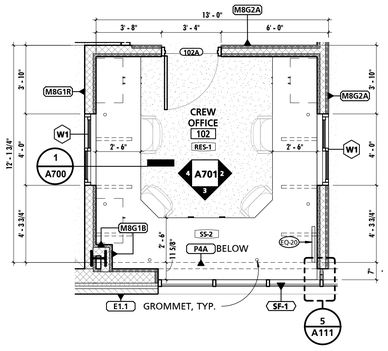
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 08/13/2021

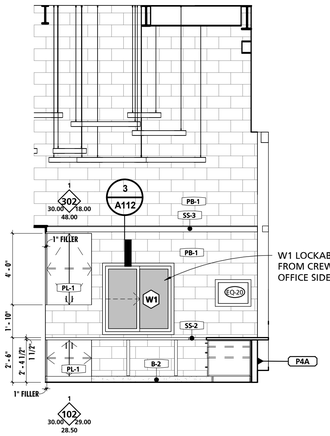
DRAWING TITLE: TYPICAL EQUIPMENT & BUILT-IN DETAILS

SHEET NUMBER: A700

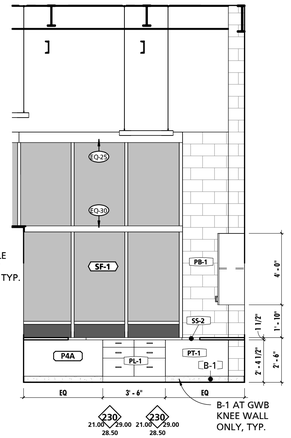
7/20/2021 11:44:18 AM



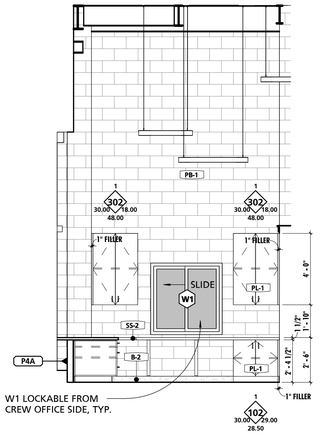
1 CREW OFFICE 102
1/4" = 1'-0"



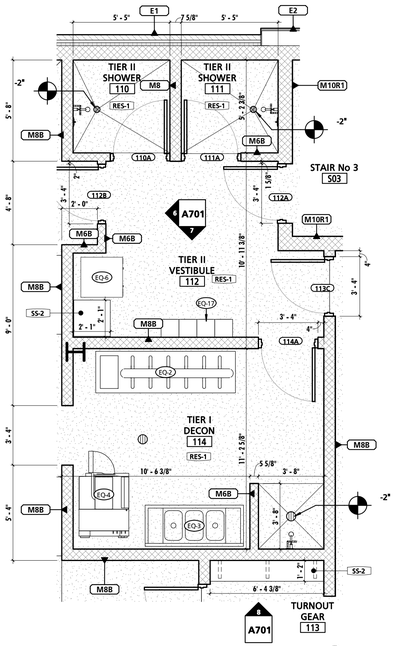
2 102 EAST ELEVATION
1/4" = 1'-0"



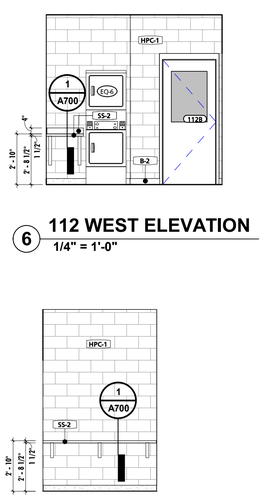
3 102 SOUTH ELEVATION
1/4" = 1'-0"



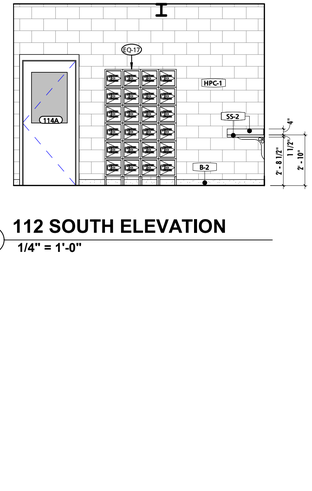
4 102 WEST ELEVATION
1/4" = 1'-0"



5 ENLARGED PLAN @ DECON
1/4" = 1'-0"

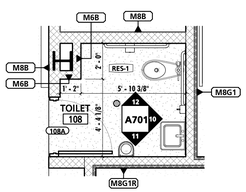


6 112 WEST ELEVATION
1/4" = 1'-0"

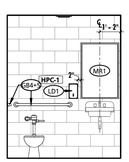


7 112 SOUTH ELEVATION
1/4" = 1'-0"

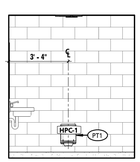
8 113 NORTH ELEVATION
1/4" = 1'-0"



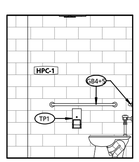
9 TOILET 108
1/4" = 1'-0"



10 108 EAST ELEVATION
1/4" = 1'-0"



11 108 SOUTH ELEVATION
1/4" = 1'-0"



12 108 NORTH ELEVATION
1/4" = 1'-0"

SCHEDULE - TOILET ROOM ACCESSORIES

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CR1	HEAVY DUTY SHOWER CURTAIN ROD	AMERICAN SPECIALTIES	1214-2	
GB1	18" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB3	30" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB4+5	36" LONG (BACK) & 48" LONG (SIDE) CORNER TOILET GRAB BARS	AMERICAN SPECIALTIES	3700 SERIES	
GB6	48" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
LD1	VERTICAL WALL MOUNTED SOAP DISPENSER	PK SC DISPENSER	PK SC DISPENSER	SIZE TO MATCH CITY'S EXISTING SOAP PACKETS
MR1	24" x 36" CHANNEL FRAME MIRROR	AMERICAN SPECIALTIES	0600-2436	
PT1	CENTER PULL PAPER TOWEL DISPENSER	SSS TRIPLE S	76114	
RH1	DOUBLE ROBE HOOK	AMERICAN SPECIALTIES	7345	
SD1	RECESSED SOAP DISH	AMERICAN SPECIALTIES	7410	
SS1	RECTANGULAR PHENOLIC FOLD-UP SHOWER SEAT	AMERICAN SPECIALTIES	8203-20	
TP1	WALL MOUNT TOILET TISSUE DISPENSER	OMNI 11-209	OMNI 11-209	

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

GENERAL INT ELEVATION NOTES

NOTE #	NOTE
1	1A PRIME CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING FOR ALL WALL MOUNTED EQUIPMENT & DEVICES.
2	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 303, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1 ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED WALL BOXES OR THEIR ASSOCIATED FIXTURES.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

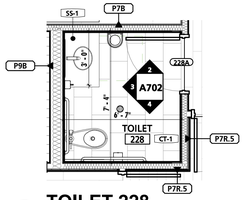
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

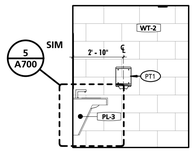
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ENLARGED PLANS & INT. ELEVATIONS
SHEET NUMBER: A701

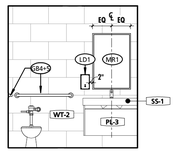
7/20/2021 11:44:28 AM



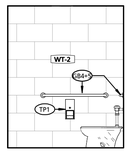
1 TOILET 228
1/4" = 1'-0"



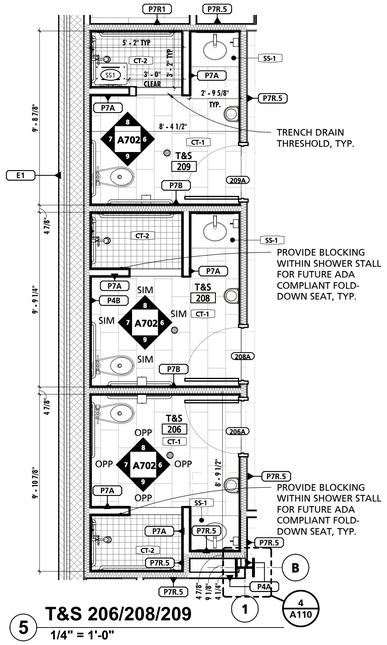
2 228 NORTH ELEVATION
1/4" = 1'-0"



3 228 WEST ELEVATION
1/4" = 1'-0"



4 228 SOUTH ELEVATION
1/4" = 1'-0"

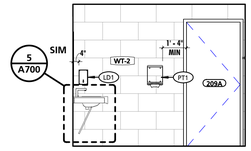


TRENCH DRAIN THRESHOLD, TYP.

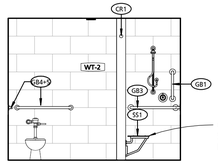
PROVIDE BLOCKING WITHIN SHOWER STALL FOR FUTURE ADA COMPLIANT FOLD-DOWN SEAT, TYP.

PROVIDE BLOCKING WITHIN SHOWER STALL FOR FUTURE ADA COMPLIANT FOLD-DOWN SEAT, TYP.

5 T&S 206/208/209
1/4" = 1'-0"

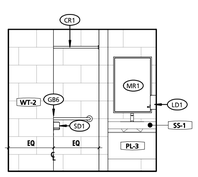


6 TYPICAL T&S EAST ELEVATION
1/4" = 1'-0"

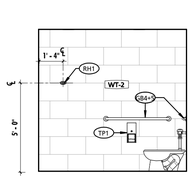


CONTRACTOR TO PROVIDE (3) FOLDING SHOWER SEATS. ONLY (1) SEAT SHALL BE INSTALLED IN T&S 206, TYP.

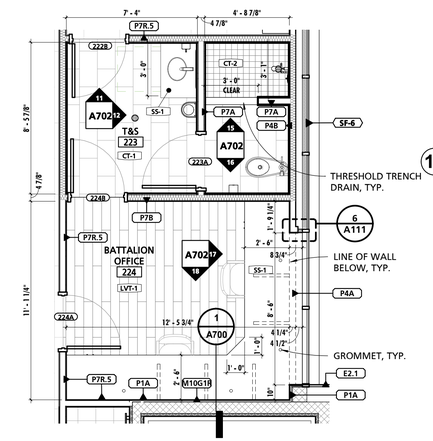
7 TYPICAL T&S WEST ELEVATION
1/4" = 1'-0"



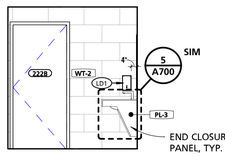
8 TYPICAL T&S NORTH ELEVATION
1/4" = 1'-0"



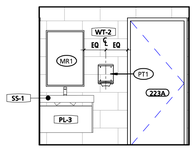
9 TYPICAL T&S SOUTH ELEVATION
1/4" = 1'-0"



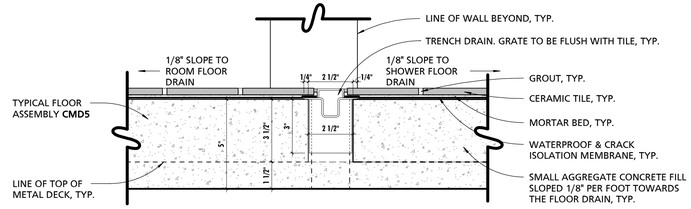
10 BATTALION OFFICE 224 & T&S 223
1/4" = 1'-0"



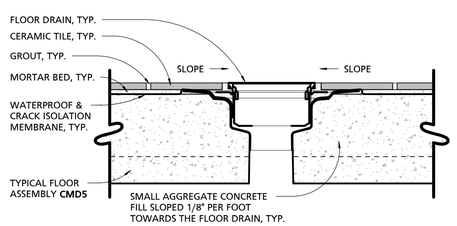
11 223 NORTH ELEVATION
1/4" = 1'-0"



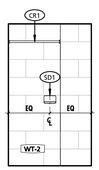
12 223 EAST ELEVATION
1/4" = 1'-0"



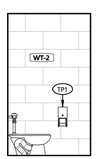
13 TYPICAL SHOWER TRENCH DRAIN DETAIL
3" = 1'-0"



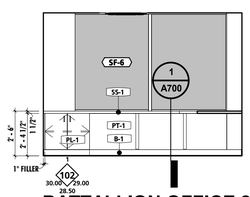
14 TYPICAL SHOWER FLOOR DRAIN DETAIL
3" = 1'-0"



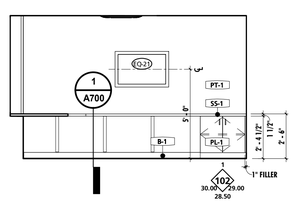
15 223 NORTH ELEVATION
1/4" = 1'-0"



16 223 SOUTH ELEVATION
1/4" = 1'-0"



17 BATTALLION OFFICE 224 EAST
1/4" = 1'-0"



18 BATTALLION OFFICE SOUTH
1/4" = 1'-0"

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

SCHEDULE - TOILET ROOM ACCESSORIES

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CR1	HEAVY DUTY SHOWER CURTAIN ROD	AMERICAN SPECIALTIES	1214-2	
GB1	18" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB3	30" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
GB4+5	36" LONG (BACK) & 48" LONG (SIDE) CORNER TOILET GRAB BARS	AMERICAN SPECIALTIES	3700 SERIES	
GB6	48" GRAB BAR	AMERICAN SPECIALTIES	3700 SERIES	
LD1	VERTICAL WALL MOUNTED SOAP DISPENSER	PK SC DISPENSER	PK SC DISPENSER	SIZE TO MATCH CITY'S EXISTING SOAP PACKETS
MR1	24" x 36" CHANNEL FRAME MIRROR	AMERICAN SPECIALTIES	0600-2436	
PT1	CENTER PULL PAPER TOWEL DISPENSER	SSS TRIPLE S	76114	
RH1	DOUBLE ROBE HOOK	AMERICAN SPECIALTIES	7345	
SD1	RECESSED SOAP DISH	AMERICAN SPECIALTIES	7410	
SS1	RECTANGULAR PHENOLIC FOLD-UP SHOWER SEAT	AMERICAN SPECIALTIES	8203-20	
TP1	WALL MOUNT TOILET TISSUE DISPENSER	OMNI 11-209	OMNI 11-209	

GENERAL INT ELEVATION NOTES

NOTE #	NOTE
1	1A PRIME CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING FOR ALL WALL MOUNTED EQUIPMENT & DEVICES.
2	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 303, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1 ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED WALL BOXES OR THEIR ASSOCIATED FIXTURES.

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SEAL:

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

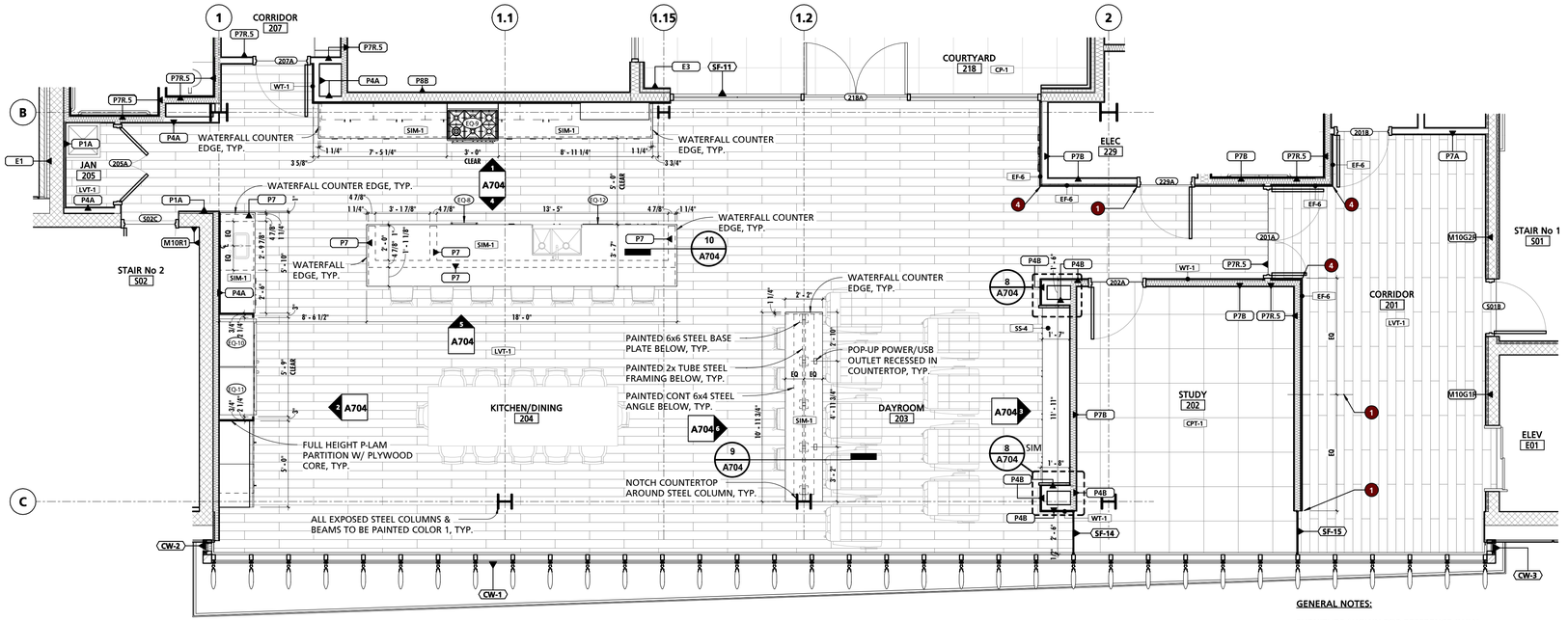
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: ENLARGED PLANS & INT. ELEVATIONS
SHEET NUMBER: A702

7/20/2021 11:44:38 AM



GENERAL NOTES:

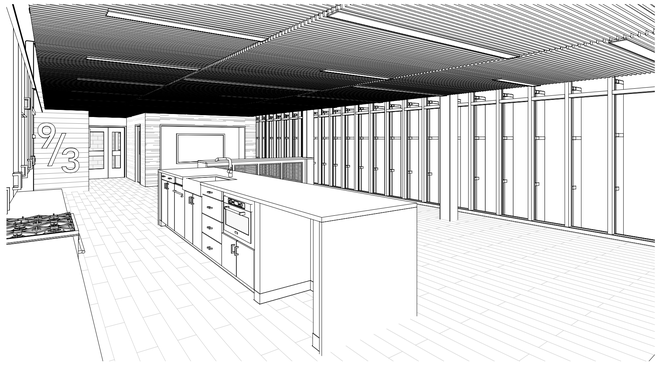
FURNITURE SHOWN FOR REFERENCE ONLY

0 TYPICAL FINISH KEYNOTES

NO.	NOTE
1	FIBER-CEMENT PANEL CONTROL JOINT LOCATION. CONTROL JOINT TO BE ALIGNED W/ JOINT OF FACTORY OUTSIDE CORNER PANEL WHERE PROVIDED.
2	FIRE POLE & GATE ENCLOSURE TO BE FACTORY FINISHED & PRE-ASSEMBLED BY MNFR
3	GWB CONTROL JOINT TO ALIGN W/ LOCKER ALCOVE
4	WHERE EF-6 IS USED IN INTERIOR APPLICATION, OUTSIDE CORNER SHALL BE MITERED. BOTTOM PANEL TO BE HELD 1/4" OFF FINISH FLOOR.

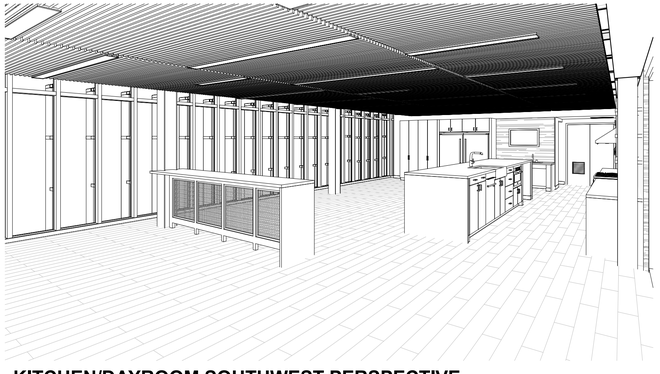
1 KITCHEN/DINING 204

1/4" = 1'-0"

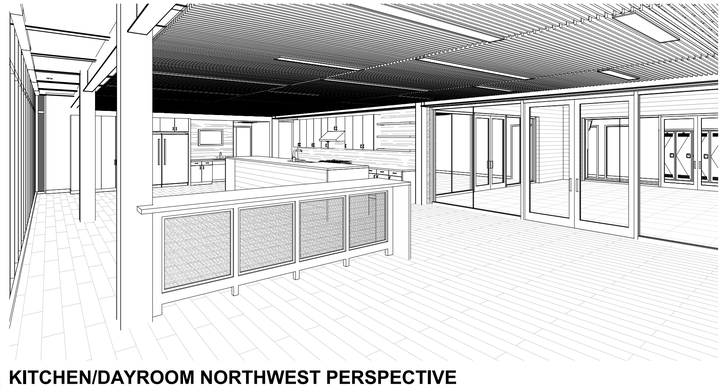


2 KITCHEN/DAYROOM SOUTHEAST PERSPECTIVE

3 KITCHEN/DAYROOM NORTHEAST PERSPECTIVE



4 KITCHEN/DAYROOM SOUTHWEST PERSPECTIVE



5 KITCHEN/DAYROOM NORTHWEST PERSPECTIVE

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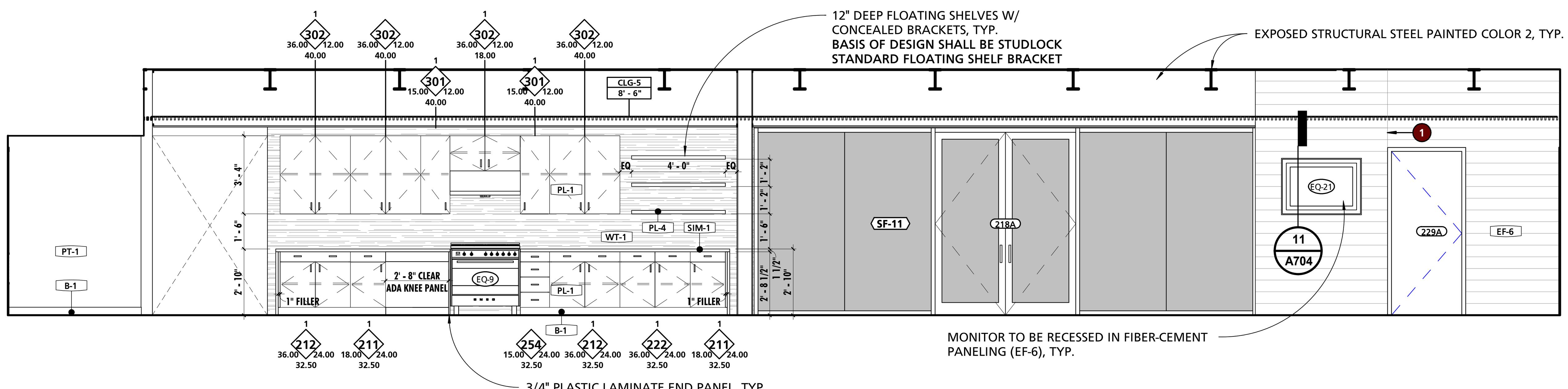
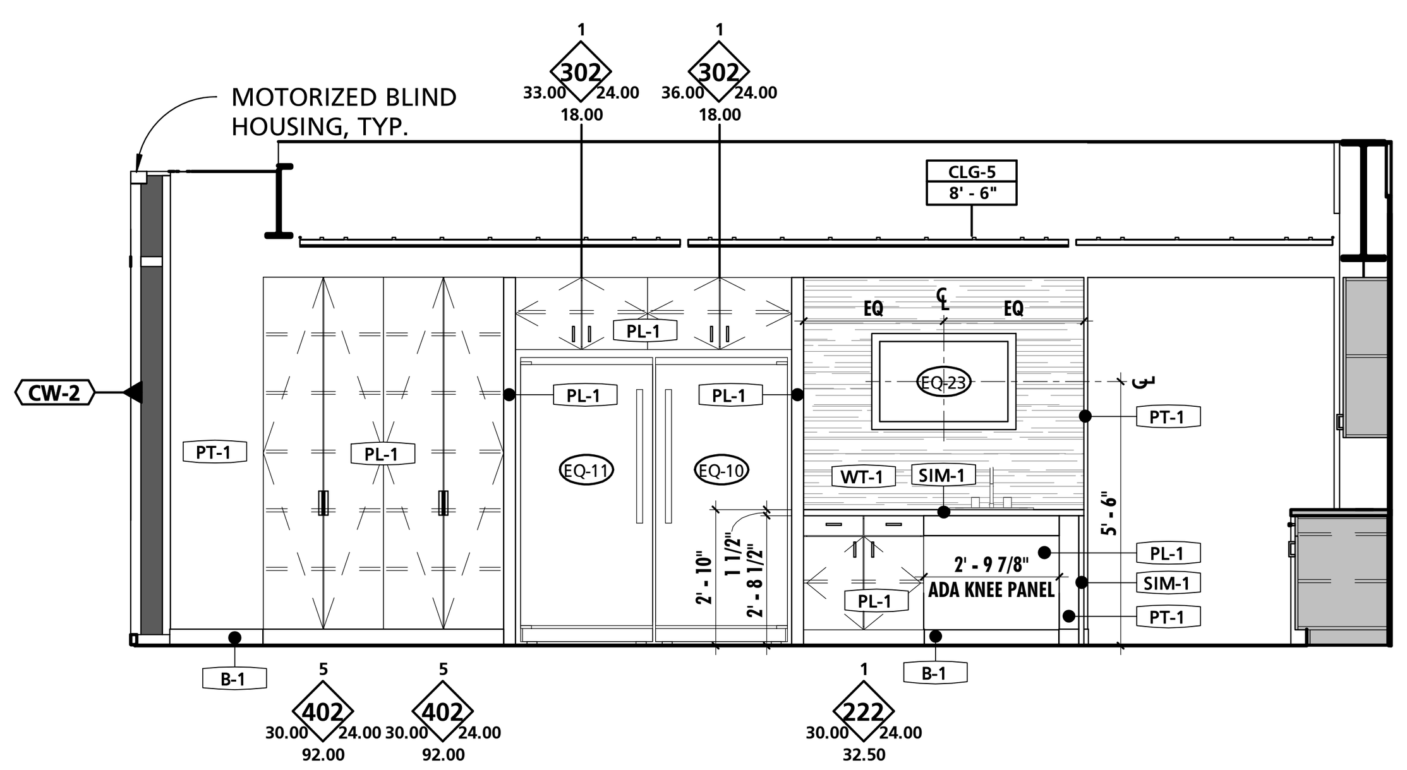
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ENLARGED PLANS & INT. ELEVATIONS
SHEET NUMBER: A703

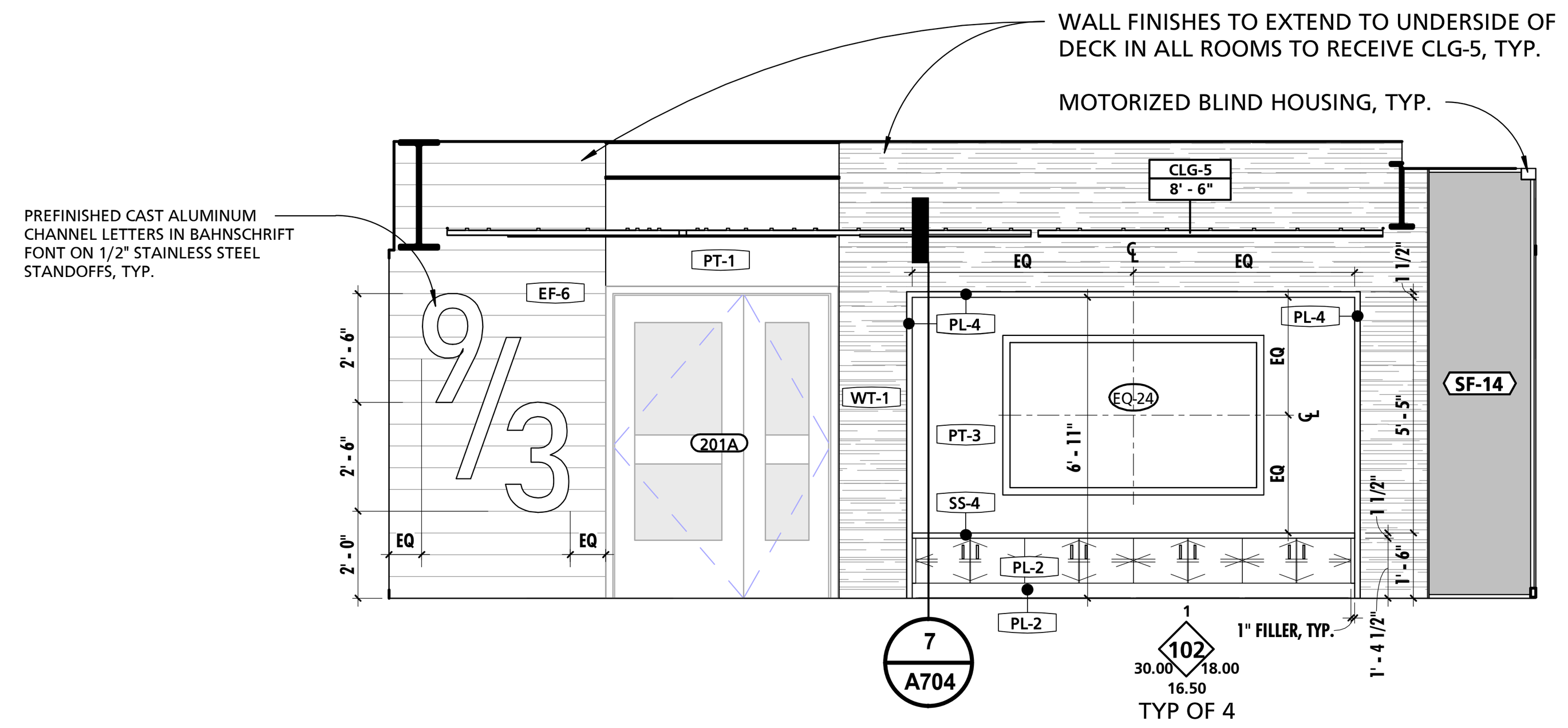
7/20/2021 12:11:08 PM



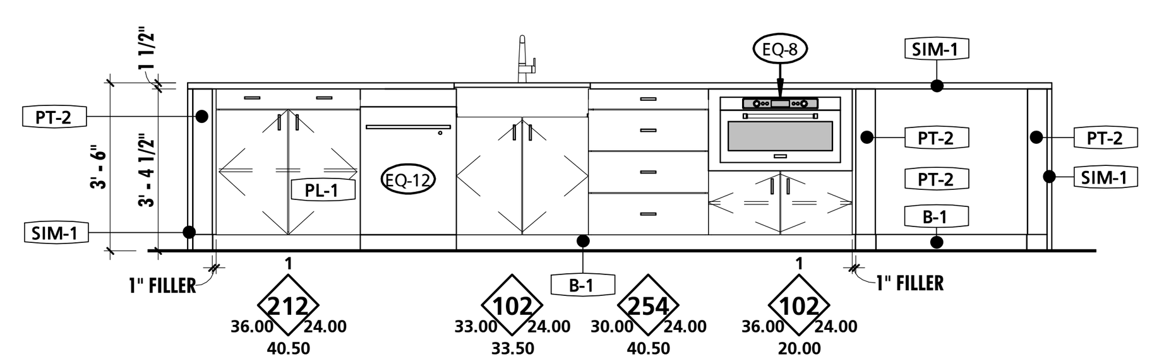
1 KITCHEN/DINING 204 NORTH ELEVATION
1/4" = 1'-0"



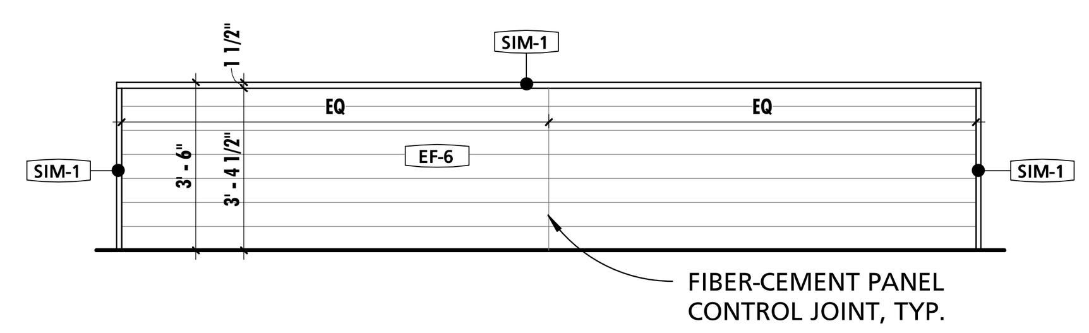
2 KITCHEN/DINING 204 WEST ELEVATION
1/4" = 1'-0"



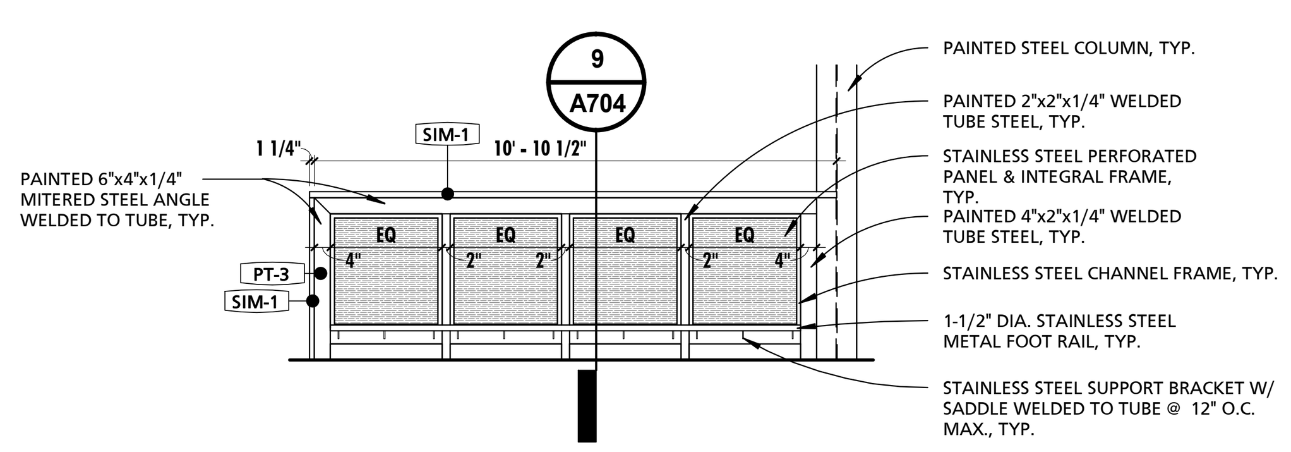
3 DAYROOM 203 EAST ELEVATION
1/4" = 1'-0"



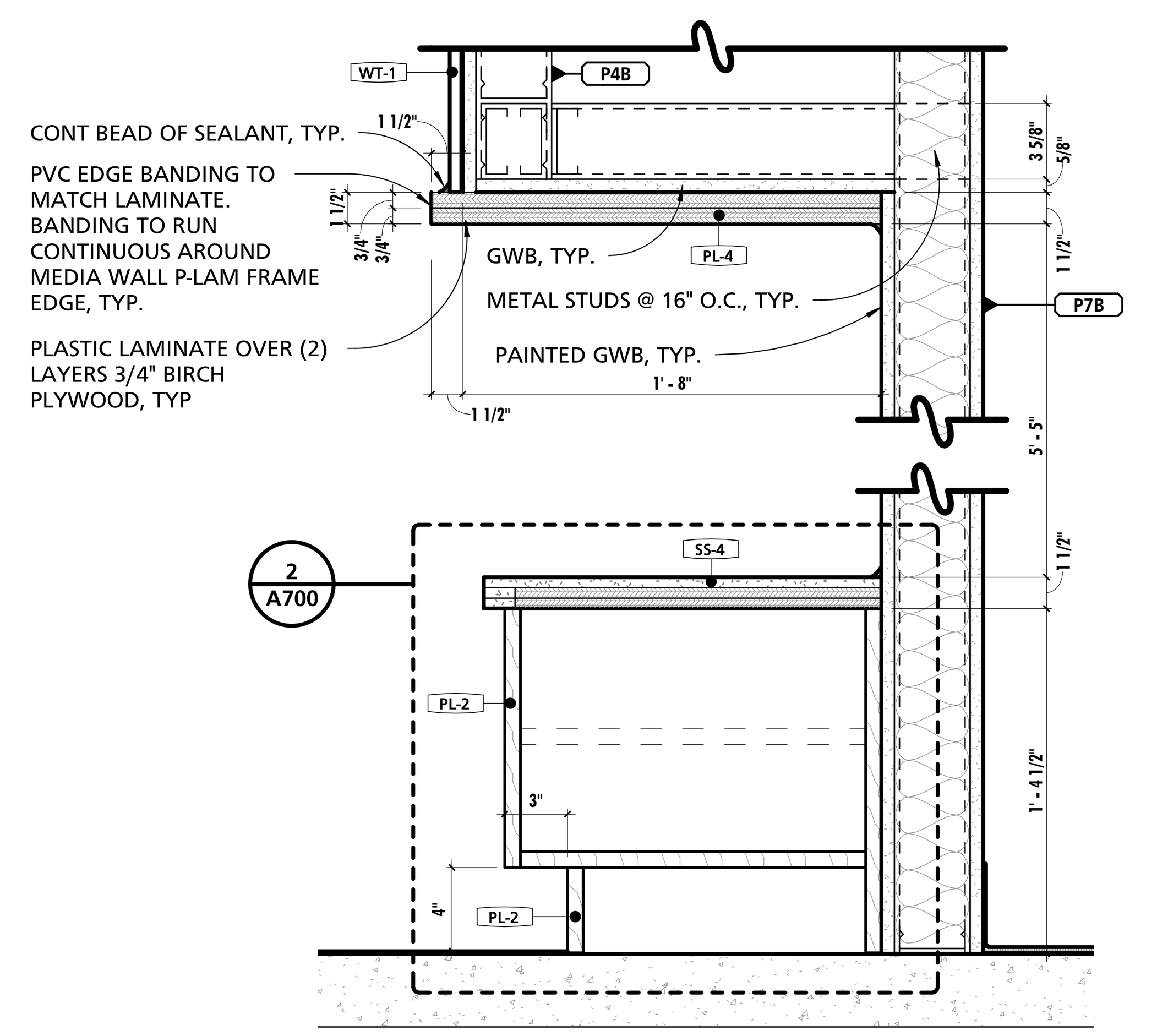
4 KITCHEN ISLAND SOUTH ELEVATION
1/4" = 1'-0"



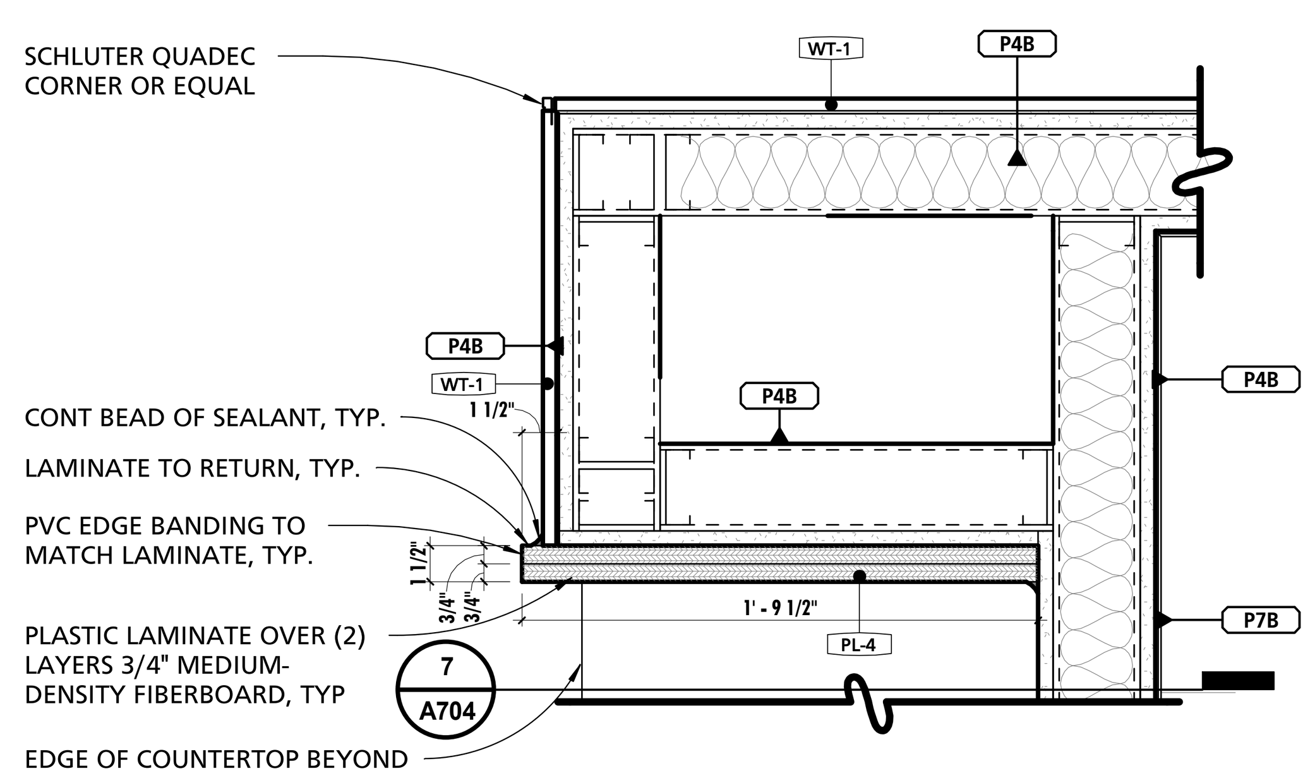
5 KITCHEN ISLAND NORTH ELEVATION
1/4" = 1'-0"



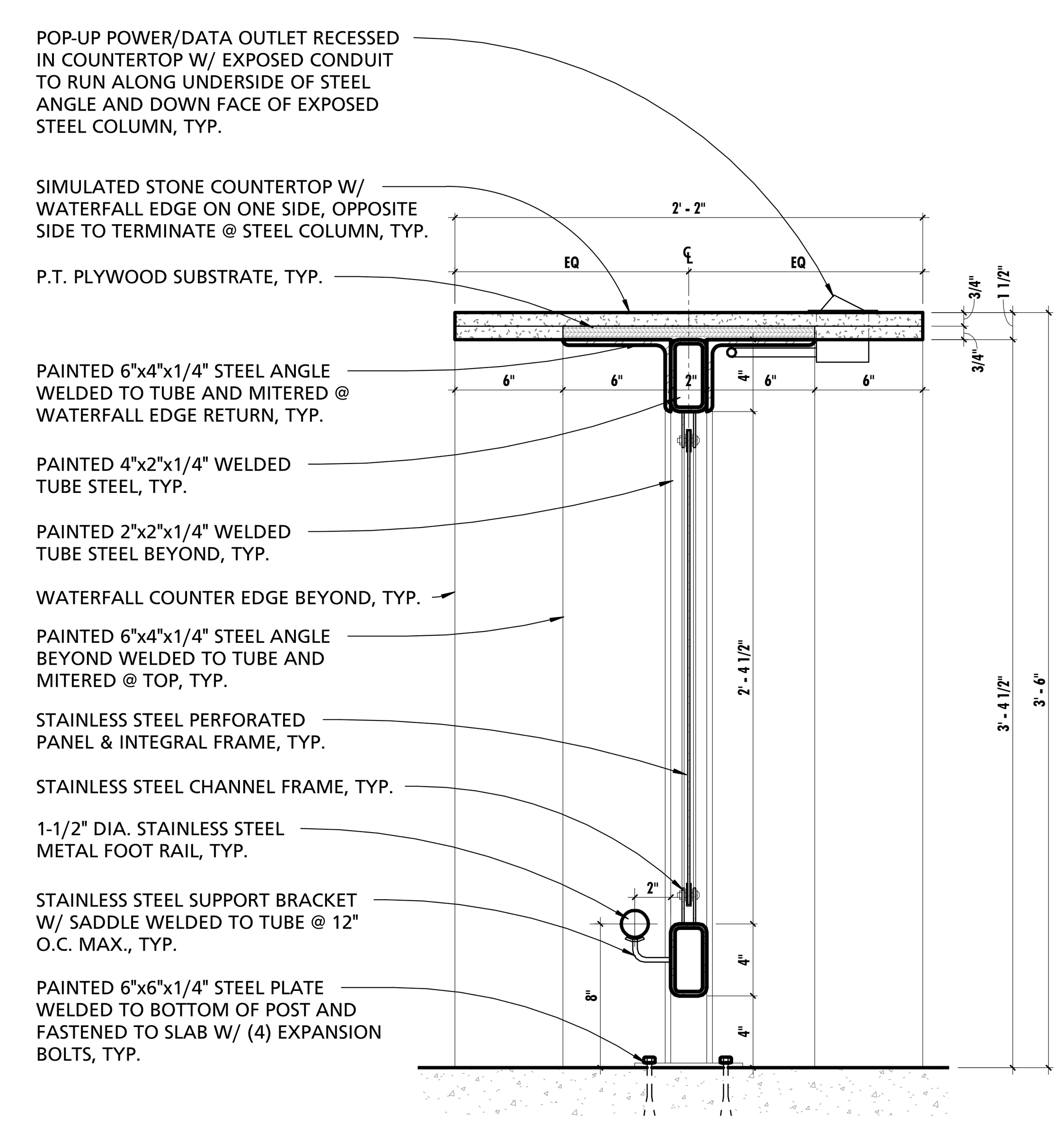
6 KITCHEN/DINING 204 BARTOP ELEVATION
1/4" = 1'-0"



7 SOLID SURFACE SURROUND @ CLG & CASEWORK
1 1/2" = 1'-0"



8 SOLID SURFACE SURROUND @ WALL
1 1/2" = 1'-0"



9 SIMULATED STONE BARTOP DETAIL
1 1/2" = 1'-0"

SCHEDULE - MATERIAL FINISH KEY

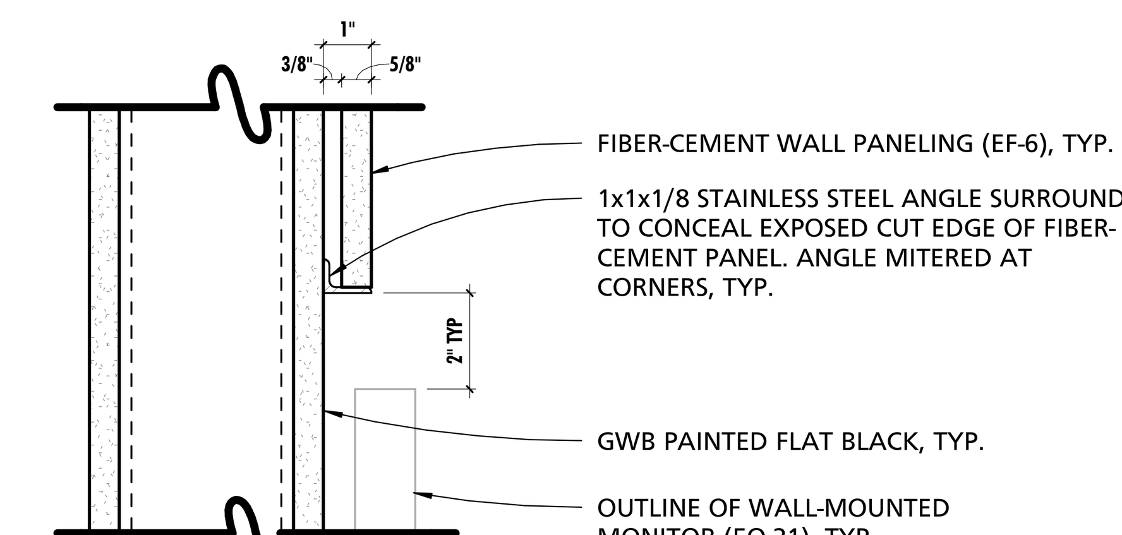
FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

SCHEDULE - EXTERIOR FINISH KEY

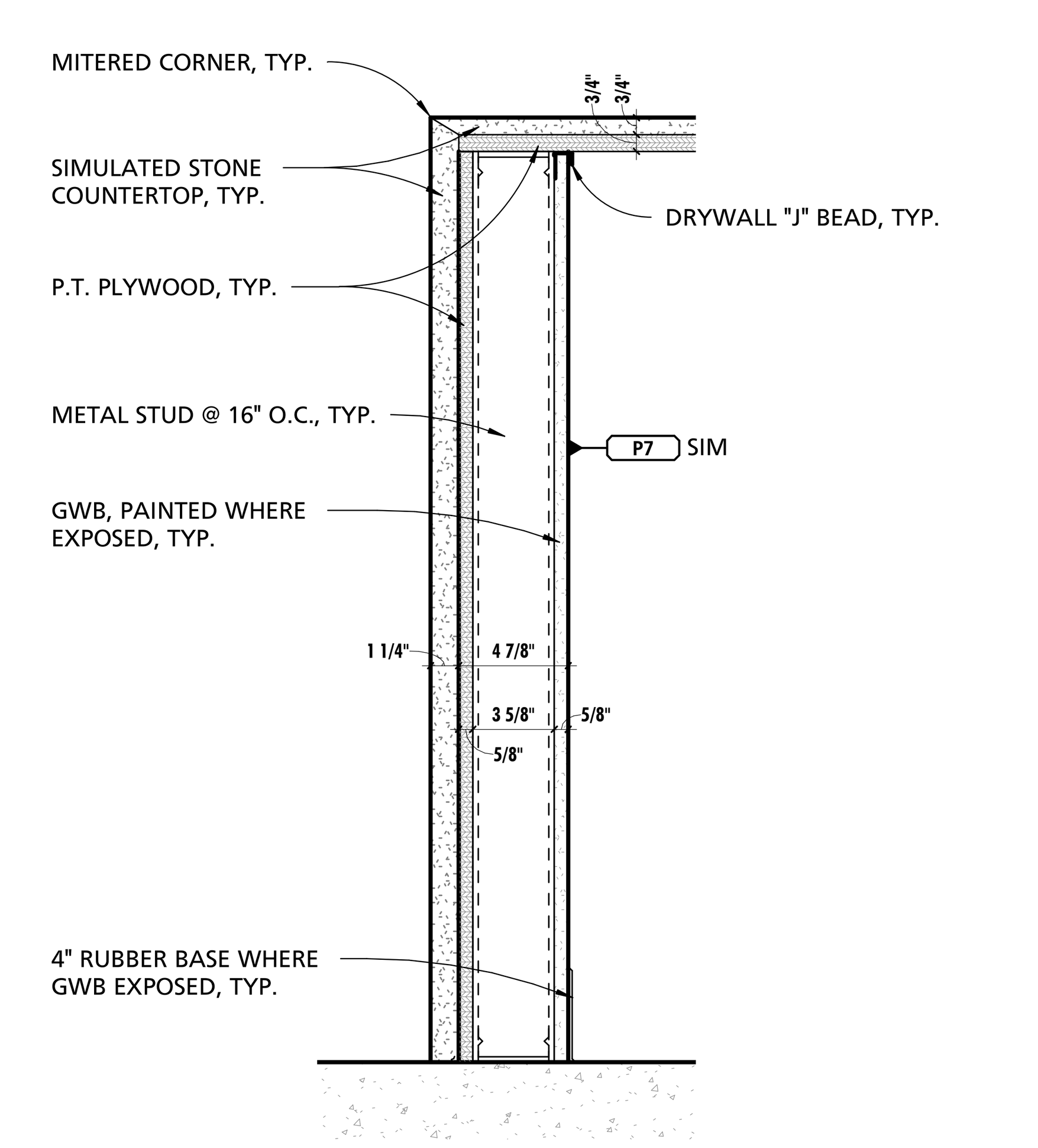
FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
EF-1	STANDARD BRICK VENEER	GLEN GERY	SIOUX CITY - EBONITE VELOUR	
EF-2	COMPOSITE METAL WALL PANEL	PAC-CLAD	PAC-3000 RS - DEEP BLACK	
EF-3	PREFINISHED METAL FASCIA		ANODIZED ALUM	
EF-4	PREFINISHED METAL COPING	PAC-CLAD	DEEP BLACK	MATCH METAL PANEL COLOR
EF-6	HORIZONTAL FIBER CEMENT SIDING	NICHIHA	VINTAGEWOOD - CEDAR	
EF-7	PAINTED STEEL LINTEL			EXPOSED STEEL PAINTED IN H.P.C.

0 TYPICAL FINISH KEYNOTES

NO.	NOTE
1	FIBER-CEMENT PANEL CONTROL JOINT LOCATION. CONTROL JOINT TO BE ALIGNED W/ JOINT OF FACTORY OUTSIDE CORNER PANEL WHERE PROVIDED.
2	FIRE POLE & GATE ENCLOSURE TO BE FACTORY FINISHED & PRE-ASSEMBLED BY MNFR
3	GWB CONTROL JOINT TO ALIGN W/ LOCKER ALCOVE
4	WHERE EF-6 IS USED IN INTERIOR APPLICATION, OUTSIDE CORNER SHALL BE MITERED. BOTTOM PANEL TO BE HELD 1/4" OFF FINISH FLOOR.



11 RECESSED MONITOR DETAIL
3" = 1'-0"



10 TYPICAL WATERFALL COUNTER EDGE DETAIL
1 1/2" = 1'-0"

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SEAL:
REGISTERED ARCHITECT PENNSYLVANIA DAVID A. WOODWARD RA405311

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

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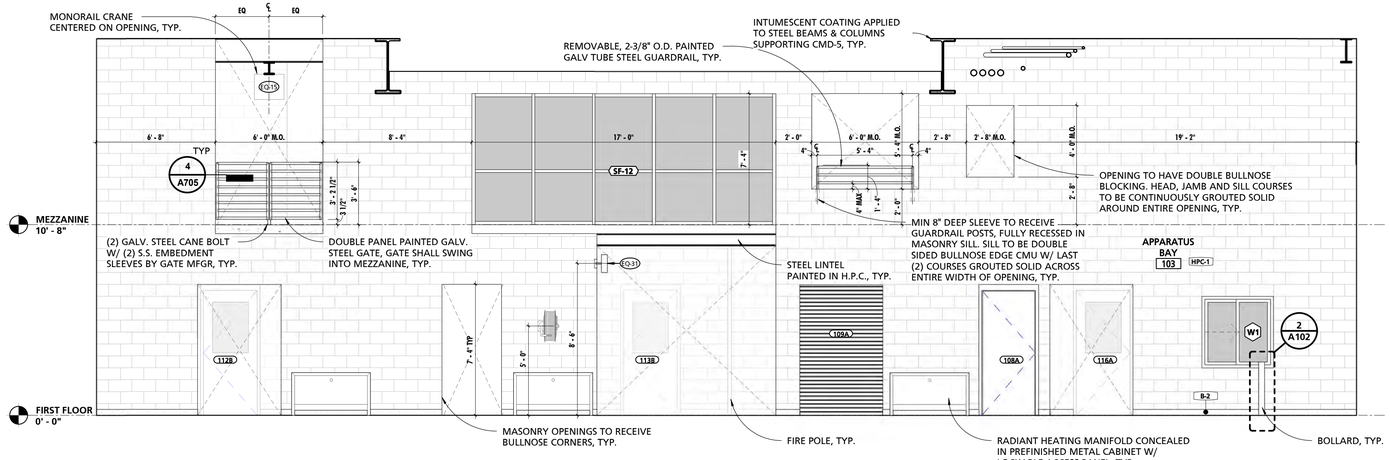
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

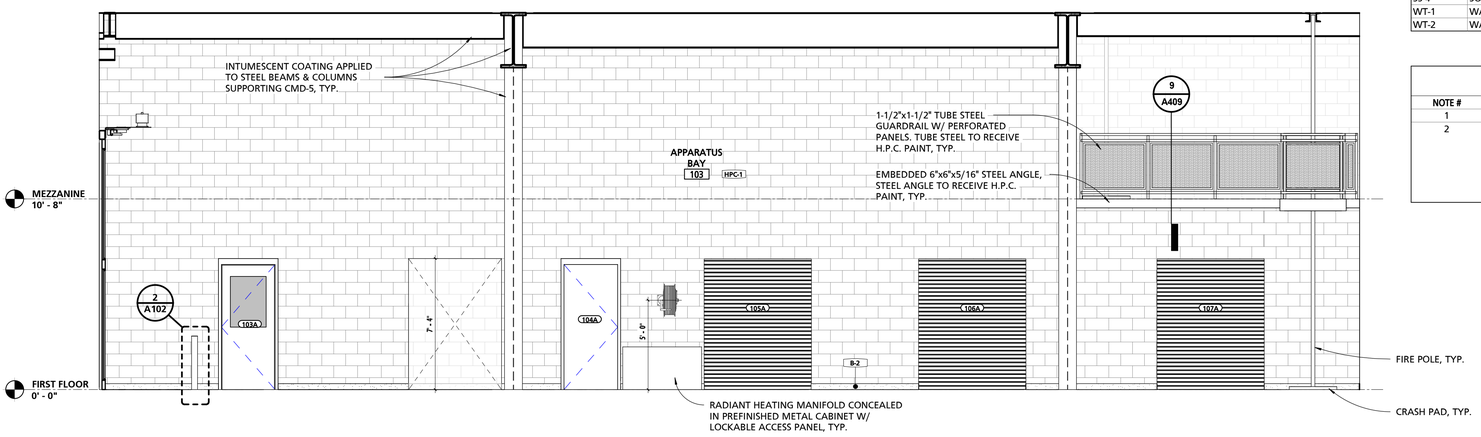
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ENLARGED PLANS & INT. ELEVATIONS
SHEET NUMBER: A704

7/20/2021 12:09:02 PM



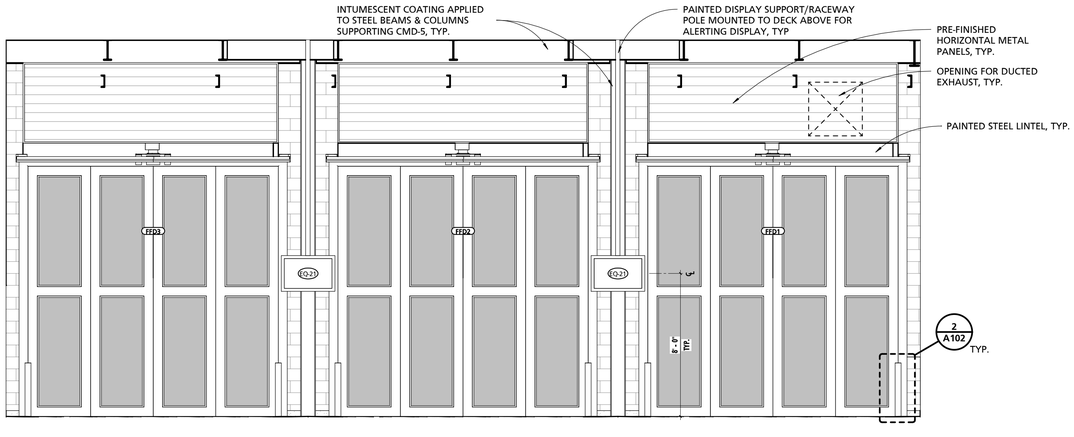
1 APPARATUS BAY 103 EAST ELEVATION

1/4" = 1'-0"



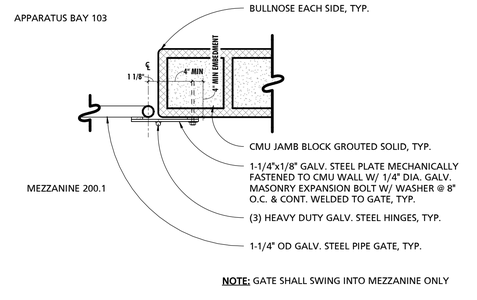
2 APPARATUS BAY 103 WEST ELEVATION

1/4" = 1'-0"



3 APPARATUS BAY 103 SOUTH ELEVATION

1/4" = 1'-0"



NOTE: GATE SHALL SWING INTO MEZZANINE ONLY

4 GATE JAMB DETAIL @ CMU WALL

1 1/2" = 1'-0"

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4' UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
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PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
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SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

GENERAL INT ELEVATION NOTES

NOTE #	NOTE
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SEAL:

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

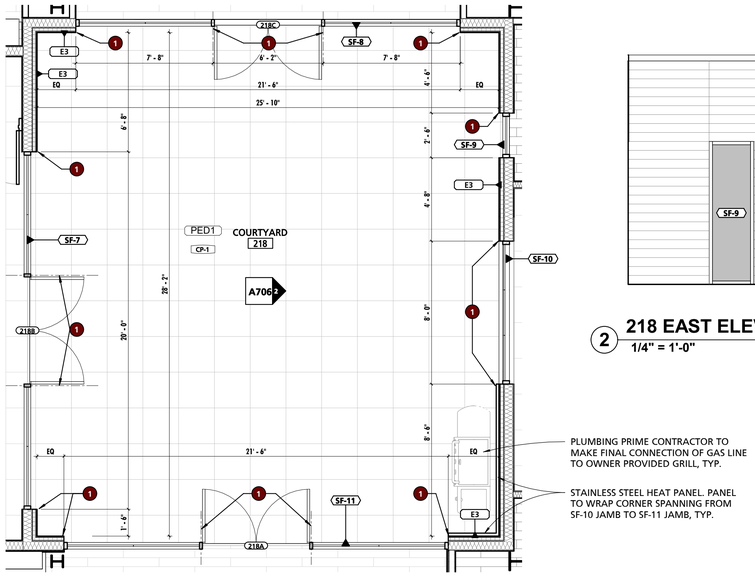
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ENLARGED PLANS & INT. ELEVATIONS
SHEET NUMBER: A705

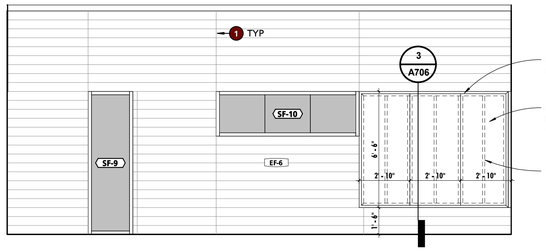
7/20/2021 11:45:09 AM



1 COURTYARD 218
1/4" = 1'-0"

PLUMBING PRIME CONTRACTOR TO MAKE FINAL CONNECTION OF GAS LINE TO OWNER PROVIDED GRILL, TYP.

STAINLESS STEEL HEAT PANEL. PANEL TO WRAP CORNER SPANNING FROM SF-10 JAMB TO SF-11 JAMB, TYP.

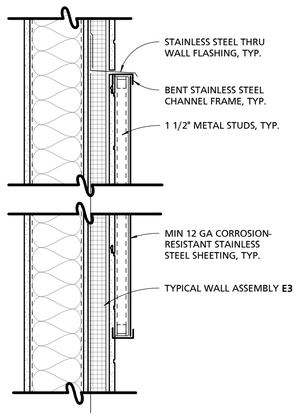


BENT STAINLESS STEEL CHANNEL FRAME, TYP.

MIN 12 GA CORROSION-RESISTANT STAINLESS STEEL SHEETING, TYP.

1 1/2" METAL STUDS, TYP.

2 218 EAST ELEVATION
1/4" = 1'-0"



STAINLESS STEEL THRU WALL FLASHING, TYP.

BENT STAINLESS STEEL CHANNEL FRAME, TYP.

1 1/2" METAL STUDS, TYP.

MIN 12 GA CORROSION-RESISTANT STAINLESS STEEL SHEETING, TYP.

TYPICAL WALL ASSEMBLY **E3**

3 TYPICAL HEAT PANEL DETAIL
1 1/2" = 1'-0"

SCHEDULE - MATERIAL FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
AVCT-1	24" x 24" ANTI-STATIC VINYL COMPOSITE TILE	TARKETT	iQ GRANIT SD	
B-1	4" RUBBER BASE	JOHNSONITE - TRADITIONAL	BURNT UMBER	
B-2	4" RESINOUS COVE BASE	BASF	UCRETE HP/F	PROVIDED W/ STAINLESS STEEL TERMINATION BAR
CG-1	STAINLESS STEEL CORNER GUARD	INPRO CORP	3 1/2" ST STL CORNER GUARD	FROM 4" UP TO 48" A.F.F. NO EXPOSED FASTENERS
CP-1	24" x 24" CONCRETE PEDESTAL PAVER	HANOVER ARCHITECTURAL PRODUCTS	PREST PAVERS	INSTALLED OVER PEDESTAL SYSTEM W/ RADIANT HEAT PANELS (FLOOR ASSEMBLY PED1). PAVERS & PEDESTAL SYSTEM BY 1A PRIME CONTRACTOR. MECHANICAL PRIME TO PROVIDE RADIANT HEAT SYSTEM.
CPT-1	20" x 20" CARPET TILE	INTERFACE	DETOURS - ONYX	
CT-1	12" x 24" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
CT-2	2" x 2" CERAMIC TILE	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	
EPX-1	EPOXY PAINT - COLOR 1	SHERWIN-WILLIAMS	N/A	
HPC-1	HIGH PERFORMANCE COATING - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
HPC-2	HIGH PERFORMANCE COATING - COLOR 2	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED METAL DECK
HPC-3	HIGH PERFORMANCE COATING - COLOR 3	SHERWIN-WILLIAMS	N/A	APPLY HPC PAINT ONLY TO EXPOSED STRUCTURAL STEEL
LVT-1	6" x 48" LUXURY VINLY TILE	ARMSTRONG	NATURAL CREATIONS - KENNESAW OAK	
PB-1	POLISHED GROUND FACE CMU - COLOR 1	YORK BUILDING PRODUCTS	GEMSTONE PLUS	
PL-1	PLASTIC LAMINATE - COLOR 1	WILSON ART	STERLING ASH	
PL-2	PLASTIC LAMINATE - COLOR 2	WILSON ART	DESIGNER WHITE	
PL-3	PLASTIC LAMINATE - COLOR 3	WILSON ART	STERLING ASH	
PL-4	PLASTIC LAMINATE - COLOR 4	WILSON ART	BATTLESHIP	
PT-1	PAINT - COLOR 1	SHERWIN-WILLIAMS	SILVERPLATE	
PT-2	PAINT - COLOR 2	SHERWIN-WILLIAMS	CYBERSPACE	
PT-3	PAINT - COLOR 3	SHERWIN-WILLIAMS	POINSETTIA	
RES-1	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-2	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RES-3	RESINOUS FLOORING	BASF	UCRETE HP/F	W/ MASTERTOP SRS 71TC TOPCOAT (2)
RT-1	RESILENT ATHLETIC FLOORING	TARKETT SPORTS MULTI-FUNCTIONAL FLOORING	REPLAY - INFRARED	
RT-2	RUBBER STAIR TREAD W/ NOSING	ROPPE	#80 & #81 RIB DESIGN	
RT-3	RUBBER FLOOR TILE W/ LINEAR PATTERN	ROPPE	984 - STRIPE DESIGN	
SC-1	SEALED CONCRETE	TBD	TBD	
SIM-1	SIMULATED STONE COUNTERTOP - COLOR 1	CAMBRIA	TEMPLETON	
SS-1	SOLID SURFACE - COLOR 1	CORIAN	NEUTRAL CONCRETE	
SS-2	SOLID SURFACE - COLOR 2	CORIAN	CARBON CONCRETE	
SS-3	SOLID SURFACE - COLOR 3	CORIAN	ROYAL RED	
SS-4	SOLID SURFACE - COLOR 4	CORIAN	GLACIER WHITE	
WT-1	WALL TILE - COLOR 1	CERAMIC TECHNICS LTD	PALERMO LIMESTONE 3D	
WT-2	WALL TILE - COLOR 2	CERAMIC TECHNICS LTD	PALERMO LIMESTONE	

SCHEDULE - EXTERIOR FINISH KEY

FINISH MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL/PRODUCT LINE	BOD COMMENTS
EF-1	STANDARD BRICK VENEER	GLEN GERY	SIOUX CITY - EBONITE VELOUR	
EF-2	COMPOSITE METAL WALL PANEL	PAC-CLAD	PAC-3000 RS - DEEP BLACK	
EF-3	PREFINISHED METAL FASCIA		ANODIZED ALUM	
EF-4	PREFINISHED METAL COPING	PAC-CLAD	DEEP BLACK	MATCH METAL PANEL COLOR
EF-6	HORIZONTAL FIBER CEMENT SIDING	NICHIHA	VINTAGEWOOD - CEDAR	
EF-7	PAINTED STEEL LINTEL			EXPOSED STEEL PAINTED IN H.P.C.

GENERAL INT ELEVATION NOTES

NOTE #	NOTE
1	1A PRIME CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING FOR ALL WALL MOUNTED EQUIPMENT & DEVICES.
2	ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 303, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 502, POLE MEZZANINE 200.2, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1 ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED WALL BOXES OR THEIR ASSOCIATED FIXTURES.

0 TYPICAL FINISH KEYNOTES

NO.	NOTE
1	FIBER-CEMENT PANEL CONTROL JOINT LOCATION. CONTROL JOINT TO BE ALIGNED W/ JOINT OF FACTORY OUTSIDE CORNER PANEL WHERE PROVIDED.
2	FIRE POLE & GATE ENCLOSURE TO BE FACTORY FINISHED & PRE-ASSEMBLED BY MNFR
3	GWB CONTROL JOINT TO ALIGN W/ LOCKER ALCOVE
4	WHERE EF-6 IS USED IN INTERIOR APPLICATION, OUTSIDE CORNER SHALL BE MITERED. BOTTOM PANEL TO BE HELD 1/4" OFF FINISH FLOOR.

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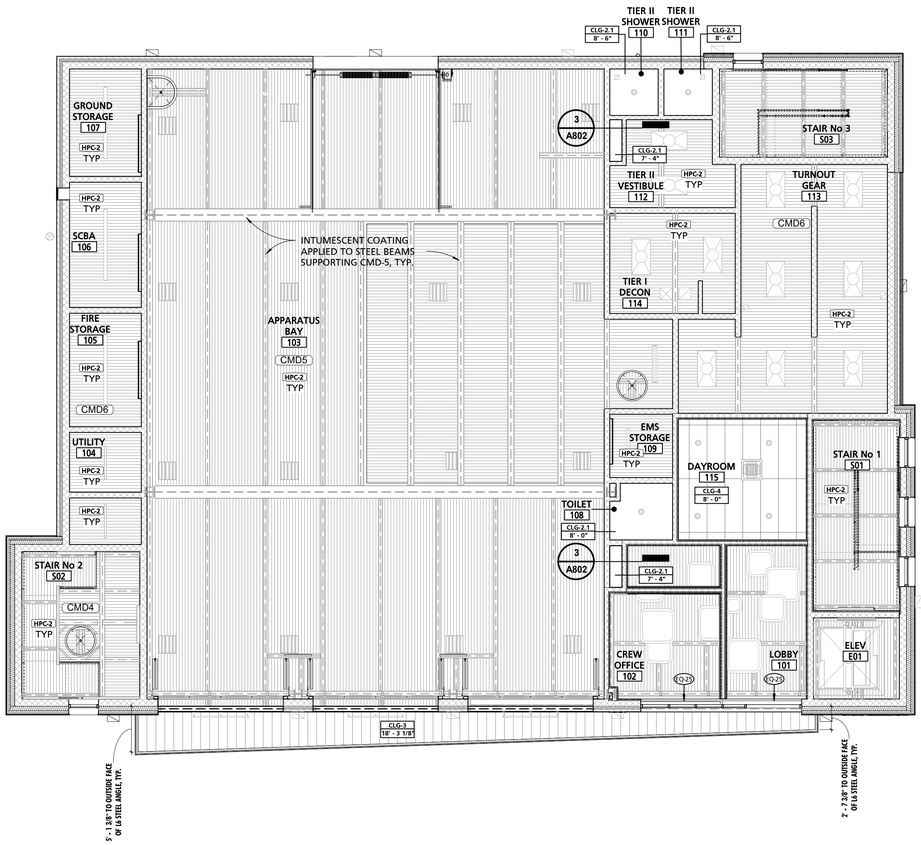
DATE ISSUED: 09/13/2021

DRAWING TITLE: ENLARGED COURTYARD PLAN & ELEVATIONS
SHEET NUMBER: A706

7/20/2021 11:45:15 AM



1 FIRST FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

GENERAL CEILING NOTES

NOTE #	NOTE
1	UNDERSIDE OF EXPOSED STRUCTURE, PIPING, AND DUCTWORK IN ALL ROOMS, STAIRWAYS, AND OTHER SPACES SHALL BE PAINTED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL COORDINATE COLOR SELECTION WITH THE ARCHITECT PRIOR TO PAINTING OR PRIMING, TYP.
2	ELECTRICAL PRIME CONTRACTOR SHALL COORDINATE FINAL FIELD LOCATION OF ALL EXIT SIGNS AND EMERGENCY LIGHTING WITH ARCHITECT PRIOR TO ROUGH-IN, TYP.
3	THE SPINKLER PRIME CONTRACTOR SHALL PROVIDE SPRINKLER SYSTEM SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL WHERE SPRINKLERS ARE REQUIRED BY CODE (SEE CODE SHEET). DRAWINGS SHALL INDICATE HEAD LOCATIONS, HEAD TYPES, AND PIPING DISTRIBUTION. IN EXPOSED OCCUPIED AREAS MAINS SHALL BE ROUTED THROUGH AREAS WITH ACCESSIBLE FINISHED CEILINGS TO THE MAXIMUM EXTENT FEASIBLE. WHERE CEILINGS ARE FINISHED ALL HEADS SHALL BE EQUIPPED WITH CONCEALMENT COVERS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4	ALL APPLICABLE PRIME CONTRACTORS SHALL PROVIDE COORDINATION DRAWINGS WITHIN THE APPARATUS BAY AREA INDICATING, WHERE APPLICABLE, THE VEHICLE EXHAUST SYSTEMS, SPRINKLER SYSTEM, OVERHEAD DOOR TRACKS, HEATERS (INCLUDING COMBUSTIBLE CLEARANCE REQUIREMENTS), LIGHTING, RETRACTABLE DROP DOWN CORDS, INTERIOR STORMDRAIN PIPING, FANS. COORDINATION DRAWINGS AT A MINIMUM SHALL INCLUDE PLANS AND BOTH LONGITUDINAL AND TRANSVERSE SECTIONS THROUGH THE BAYS INDICATING THE LOCATION AND ELEVATION OF BAY SYSTEM COMPONENTS.
5	SPRINKLER LOCATIONS DEPICTED HEREIN ARE DIAGRAMMATIC AND ARE SHOWN FOR DESIGN INTENT ONLY.
6	ON ACT CEILINGS IN FIRE-RATED AREAS INSTALL HOLD DOWN CLIPS ON ACOUSTIC PANELS WEIGHING LESS THAN 1 LB. PER SQ. FT. PER SPEC.
7	ALL MECHANICAL, ELECTRICAL, PLUMBING, AND SPRINKLER WORK TO OCCUR IN AREAS WHERE THE STRUCTURE IS EXPOSED SHALL BE EXECUTED IN A COORDINATED, NEAT AND WORKMANLIKE MANNER. AT A MINIMUM ALL WIRING SHALL BE RUN THOUGH CONDUITS, PIPE AND DUCT INSULATION SHALL BE NEATLY INSTALLED AND PAINTABLE. ALL PIPES AND DUCTS SHALL BE RUN EITHER PERPENDICULAR OR PARALLEL TO WALL CONSTRUCTION AND SHALL BE INSTALLED AT THE SAME NOMINAL ELEVATION OR SLOPE. ALL MATERIALS AND INSTALLATION METHODS SHALL COMPLY WITH APPLICABLE CODES AND STANDARDS. WHERE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS INDICATE OTHER REQUIREMENTS THE GREATER QUALITY SHALL PREVAIL.
8	WHERE CEILINGS ARE EXPOSED ALL TIES, CABLES, AND SUPPORTS FOR CLOUDS, ELECTRICAL, MECHNICAL EQUIPMENT AND OTHER APPURTENANCES SHALL BE INSTALLED IN A NEAT, ORGANIZED AND WORKMAN LIKE MANNER. VISIBLE TIES SHALL BE PLUMB/TRUE/SQUARE TO ELEMENTS, TIGHTLY WRAPPED, WITH EXCESS WIRE NEATLY CUT.
9	APPLICABLE PRIME CONTRACTORS SHALL COORDINATE THE COLOR AND FINISH OF ALL CEILING MOUNTED EQUIPMENT SUCH AS DIFFUSERS, RETURNS, SPEAKERS, ETC. WITH THE ARCHITECT TO ENSURE THERE ARE NO STARK CONTRASTING COLORS.
10	WHERE ACT GRID LAYOUT AT EDGE CONDITIONS FOR 2X2 TILES REQUIRE TILES TO BE CUT TO LESS THAN 3", UTILIZE A 2X4 TILE IN LIEU OF THE 2X2 TILE. OMIT CILING GRID CROSS MEMBERS AS REQUIRED. NO TILE SHALL EXCEED 27" OR BE LESS THAN 3" AT PERIMETER CONDITIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE GRID MAINS AS REQUIRED TO ACHIEVE THIS DESIGN INTENT.
11	UNDERSIDE OF EXPOSED SECOND FLOOR METAL DECK AND MEZZANINE(S) METAL DECK SHALL BE PAINTED COLOR #1. ALL EXPOSED STRUCTURAL STEEL BEAMS AND COLUMNS SUPPORTING CMD5 (SECOND FLOOR DECK) TO BE COLOR #2. COLOR #2 SHALL BE TINTED TOP COAT OF INTUMESCENT COATING.
12	IN ALL ROOMS TO RECIEVE CLG-5 THE UNDERSIDE OF METAL DECK AND STRUCTURAL STEEL FRAMING SHALL BE PAINTED. ALL EXPOSED UTILITIES SUCH AS PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.
13	ELECTRICAL PRIME TO PROVIDE ALL ELECTRICAL WIRING INCLUDING TO BUT NOT LIMITED TO, GENERAL POWER SUPPLY, LOW VOLTAGE COMMUNICATIONS, A/V, DATA WIRING/CABELING, ALL WIRING ASSOCIATED WITH THE BUILDING ACCESS CONTROL SYSTEM, CAD ALERTING SYSTEM, AND CCTV SYSTEM TO BE RUN IN EXPOSED AREAS THROUGH THE FIRST FLOOR CEILING, MEZZANINE CEILINGS, UNDERSIDE OF MEZZANINE DECK, FITNESS 230, AND ALL ROOMS TO RECIEVE CLG-5 SHALL BE IN METAL CONDUIT PAINTED TO MATCH DECK ABOVE.

SCHEDULE - CEILING TYPES

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CLG-1	2x2 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-2.1	5/8" GWB ON 1 1/2" DRYWALL GRID	ARMSTRONG	DRYWALL GRID SYSTEM	GYPSUM BOARD IS PAINTED.
CLG-2.2	5/8" GWB ON 7/8" HAT CHANNEL	N/A	N/A	GYPSUM BOARD IS PAINTED.
CLG-3	12" PREFINISHED SOFFIT PANEL	PAC-CLAD	SOLID FLUSH SOFFIT	
CLG-4	2x6 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-5	WOOD SLAT CEILING	ARMSTRONG	WOODWORKS GRILLE 7265	AREA/UTILITIES ABOVE CEILING PAINTED FLAT BLACK.

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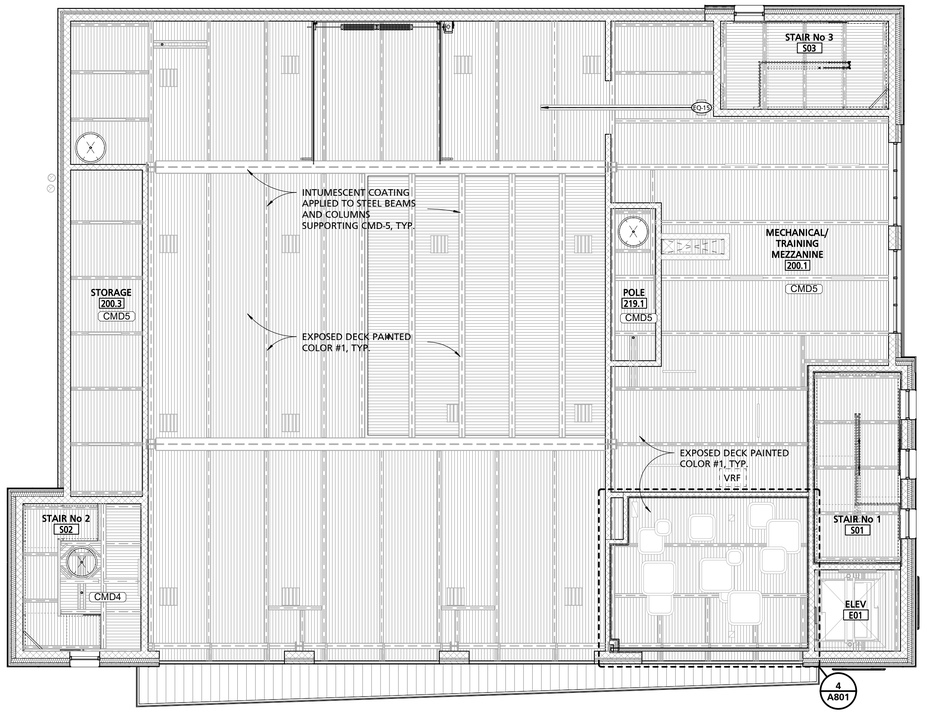
NO.	DESCRIPTION	DATE

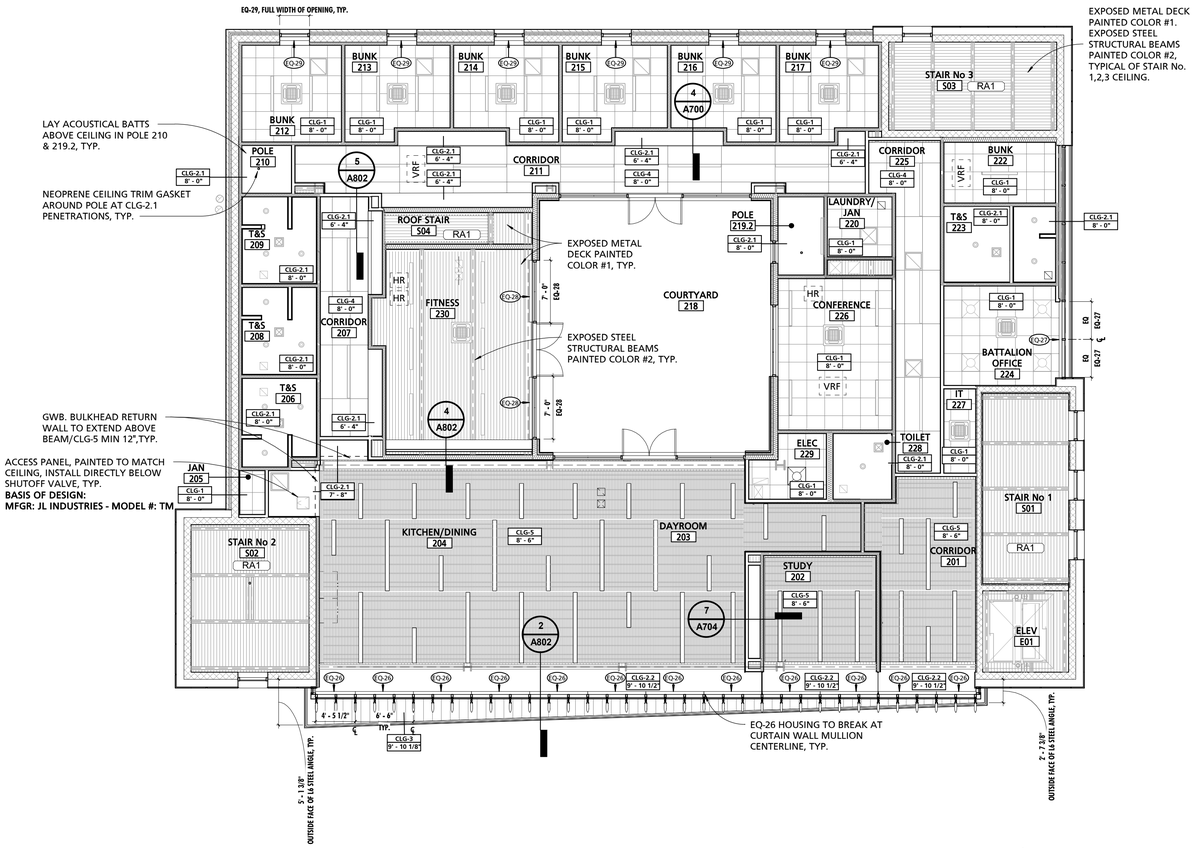
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: RCP - FIRST FLOOR
SHEET NUMBER: A800

7/20/2021 11:45:23 AM



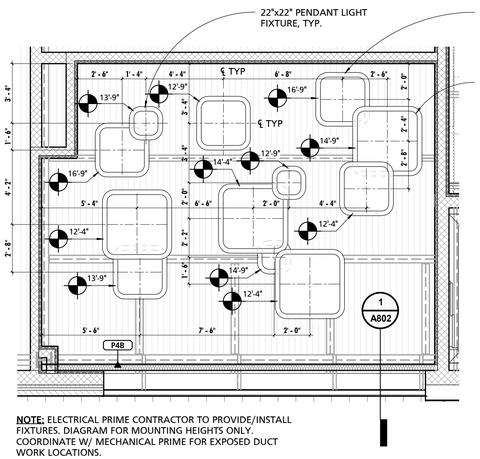
1 MEZZANINE REFLECTED CEILING PLAN

1/8" = 1'-0"



2 SECOND FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"



NOTE: ELECTRICAL PRIME CONTRACTOR TO PROVIDE/INSTALL FIXTURES. DIAGRAM FOR MOUNTING HEIGHTS ONLY. COORDINATE W/ MECHANICAL PRIME FOR EXPOSED DUCT WORK LOCATIONS.

4 MEZZANINE REFLECTED CEILING PLAN @ LOBBY

1/4" = 1'-0"

SCHEDULE - CEILING TYPES

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	COMMENTS
CLG-1	2x2 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-2.1	5/8" GWB ON 1 1/2" DRYWALL GRID	ARMSTRONG	DRYWALL GRID SYSTEM	GYPSUM BOARD IS PAINTED.
CLG-2.2	5/8" GWB ON 7/8" HAT CHANNEL	N/A	N/A	GYPSUM BOARD IS PAINTED.
CLG-3	12" PREFINISHED SOFFIT PANEL	PAC-CLAD	SOLID FLUSH SOFFIT	
CLG-4	2x6 ACOUSTICAL CEILING TILE - TEGULAR	ARMSTRONG	ULTIMA	
CLG-5	WOOD SLAT CEILING	ARMSTRONG	WOODWORKS GRILLE 7265	AREA/UTILITIES ABOVE CEILING PAINTED FLAT BLACK.

GENERAL CEILING NOTES

NOTE #	NOTE
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9	APPLICABLE PRIME CONTRACTORS SHALL COORDINATE THE COLOR AND FINISH OF ALL CEILING MOUNTED EQUIPMENT SUCH AS DIFFUSERS, RETURNS, SPEAKERS, ETC. WITH THE ARCHITECT TO ENSURE THERE ARE NO STARK CONTRASTING COLORS.
10	WHERE ACT GRID LAYOUT AT EDGE CONDITIONS FOR 2X2 TILES REQUIRE TILES TO BE CUT TO LESS THAN 3", UTILIZE A 2X4 TILE IN LIEU OF THE 2X2 TILE. OMIT CILING GRID CROSS MEMBERS AS REQUIRED. NO TILE SHALL EXCEED 27" OR BE LESS THAN 3" AT PERIMETER CONDITIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE GRID MAINS AS REQUIRED TO ACHIEVE THIS DESIGN INTENT.
11	UNDERSIDE OF EXPOSED SECOND FLOOR METAL DECK AND MEZZANINE(S) METAL DECK SHALL BE PAINTED COLOR #1. ALL EXPOSED STRUCTURAL STEEL BEAMS AND COLUMNS SUPPORTING CMD5 (SECOND FLOOR DECK) TO BE COLOR #2. COLOR #2 SHALL BE TINTED TOP COAT OF INTUMESCENT COATING.
12	IN ALL ROOMS TO RECIEVE CLG-5 THE UNDERSIDE OF METAL DECK AND STRUCTURAL STEEL FRAMING SHALL BE PAINTED. ALL EXPOSED UTILITIES SUCH AS PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.
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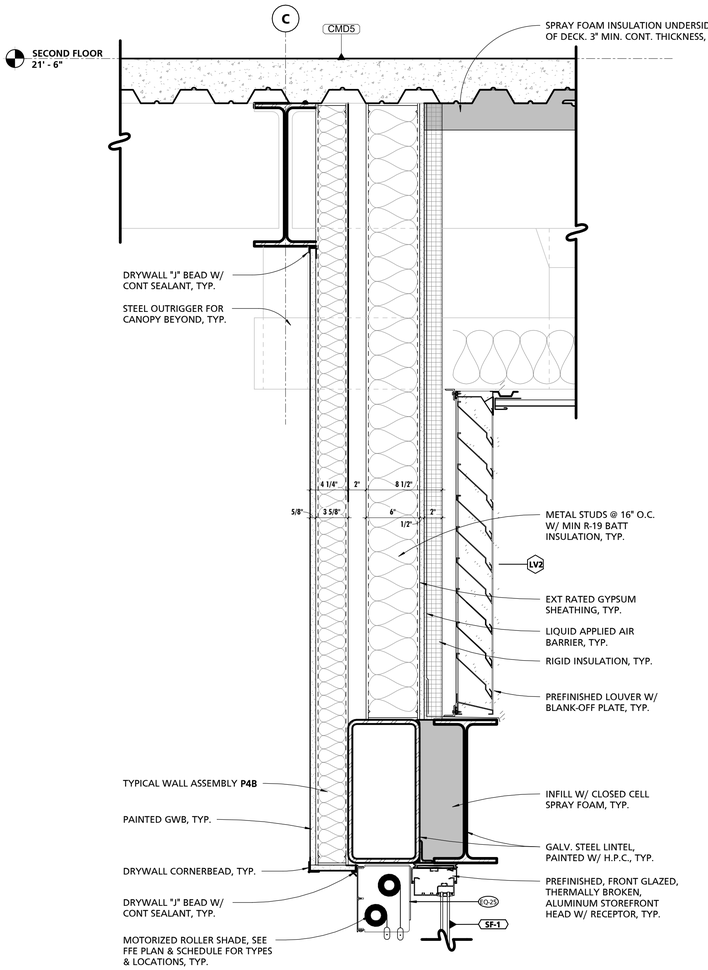
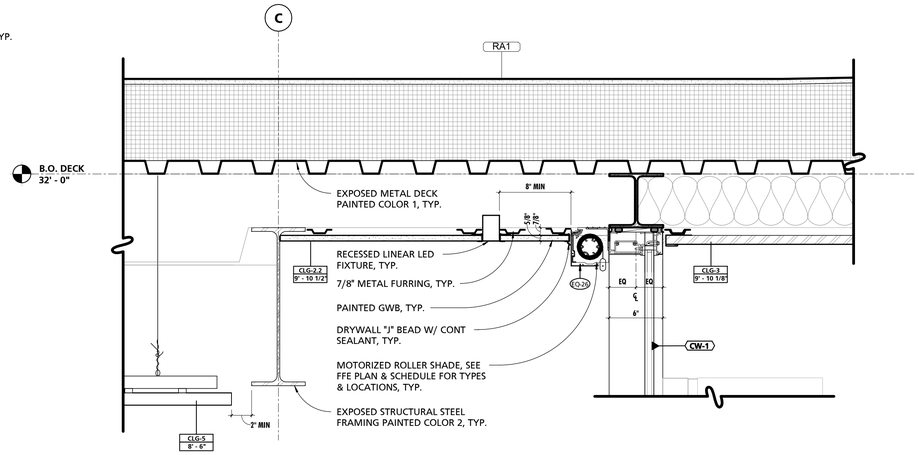
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: RCP - MEZZ & SECOND FLOOR
SHEET NUMBER: A801

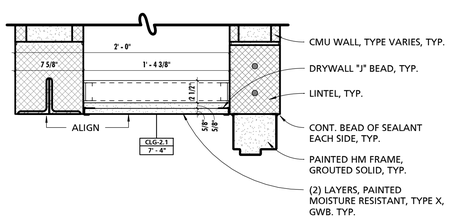
7/20/2021 11:45:34 AM



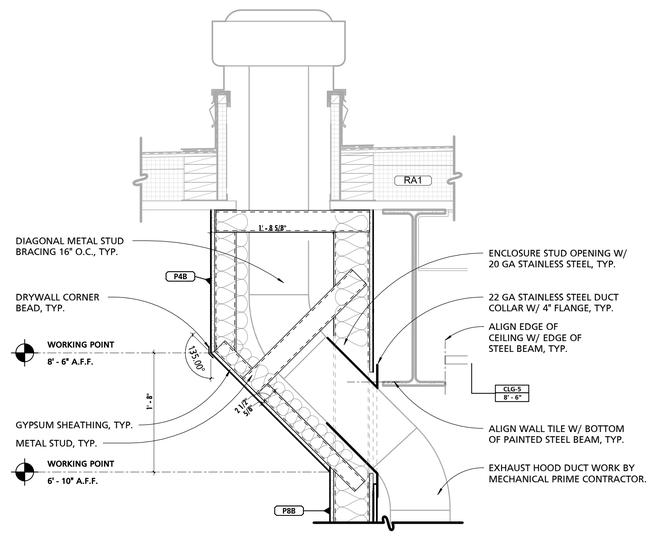
1 LOBBY BULKHEAD DETAIL
1 1/2" = 1'-0"



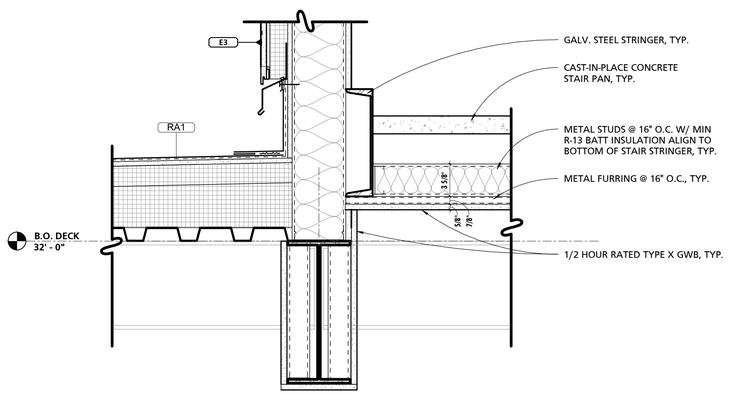
2 TYPICAL CURTAIN WALL BULKHEAD DETAIL
1 1/2" = 1'-0"



3 TYPICAL APPARATUS BAY INTERIOR SOFFIT DETAIL
1 1/2" = 1'-0"



4 ANGLED BULKHEAD @ FITNESS ROOM 230
1" = 1'-0"



5 RATED ROOF TOP ACCESS STAIR STRUCTURE DETAIL
1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

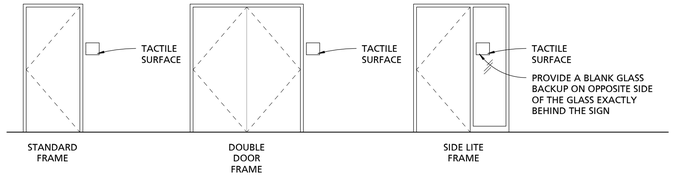
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: CEILING DETAILS
SHEET NUMBER: A802

7/20/2021 11:45:37 AM

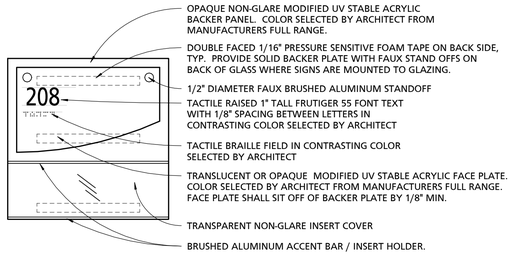


PROVIDE SIGNAGE AT ALL OF THE FOLLOWING LOCATIONS:

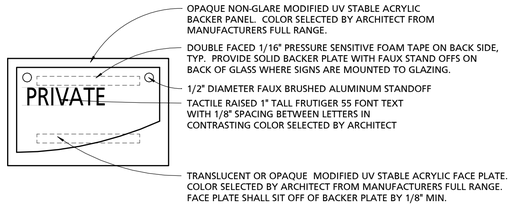
1. ADA COMPLIANT IDENTIFICATION ROOM SIGNAGE WITH REMOVABLE INSERT AT ALL ROOMS OTHER THAN MECHANICAL ROOMS AND TOILET ROOMS. SIGNS SHALL INDICATE ROOM NUMBER AND PROVIDE REMOVABLE INSERT FOR ROOM NAMES.
2. ADA COMPLIANT IDENTIFICATION ROOM SIGNAGE AT MECHANICAL ROOMS AND TOILET ROOMS. SINGLE OCCUPANT TOILET ROOMS SHALL BE IDENTIFIED AS UNI-SEX. SINGLE OCCUPANT TOILET ROOMS WITH CHANGING STATIONS SHALL BE IDENTIFIED AS FAMILY RESTROOMS.
3. ADA COMPLIANT IDENTIFICATION EXIT SIGNAGE AT ALL DOORS LEADING TO RATED EXITS.
4. ADA COMPLIANT IDENTIFICATION FLOOR LEVEL SIGNAGE AT ALL FLOOR LANDINGS OF STAIRS AND RAMPS.
5. ADA COMPLAINT INFORMATIONAL SIGNAGE AT ALL AED STATIONS AND FIRE EXTINGUISHERS.
6. ADA COMPLIANT INFORMATIONAL SIGNAGE INDICATING THE MAXIMUM OCCUPANCY OF ALL ASSEMBLY SPACES.
7. ADA COMPLIANT INFORMATIONAL SIGNAGE SHALL BE PROVIDED AT ALL ELEVATORS.

1 ADA SIGNAGE MOUNTING LOCATIONS

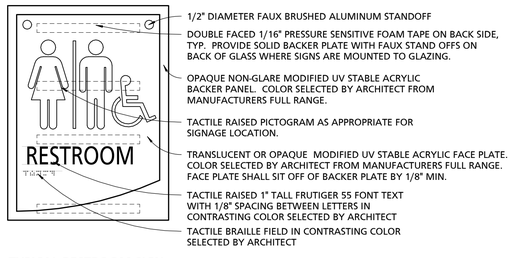
1/4" = 1'-0"



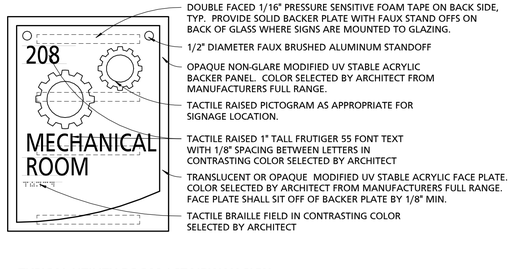
TYPICAL ROOM IDENTIFICATION SIGNAGE



TYPICAL INFORMATIONAL SIGNAGE



TYPICAL RESTROOM SIGN



TYPICAL UTILITY ROOM / STAIRWAY SIGN

2 TYPICAL SIGNAGE DETAILS

3" = 1'-0"

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REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA MANNS WOODWARD RAMSHAW

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

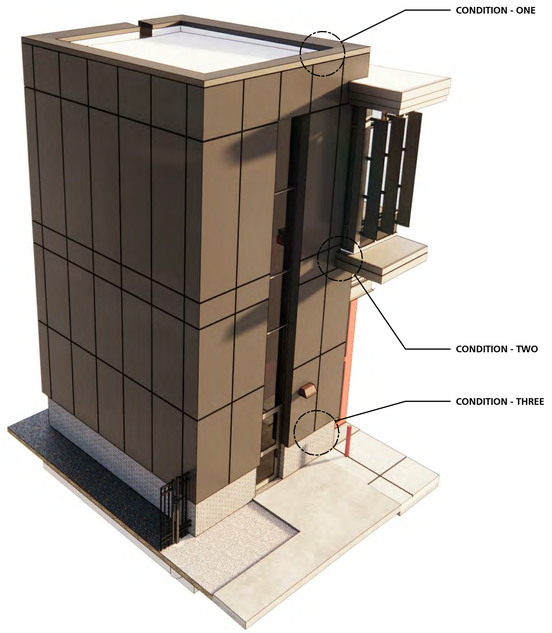
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

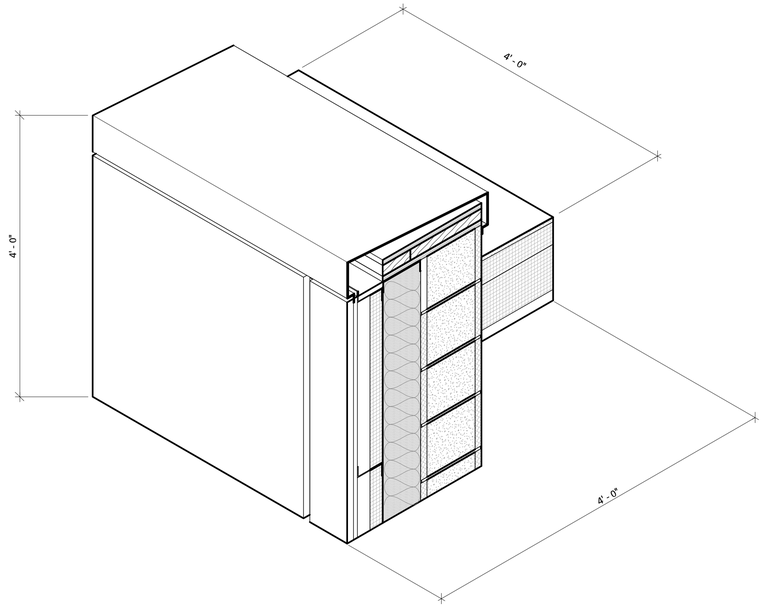
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: TYPICAL ADA SIGNAGE DETAILS
SHEET NUMBER: A900

7/20/2021 11:45:39 AM

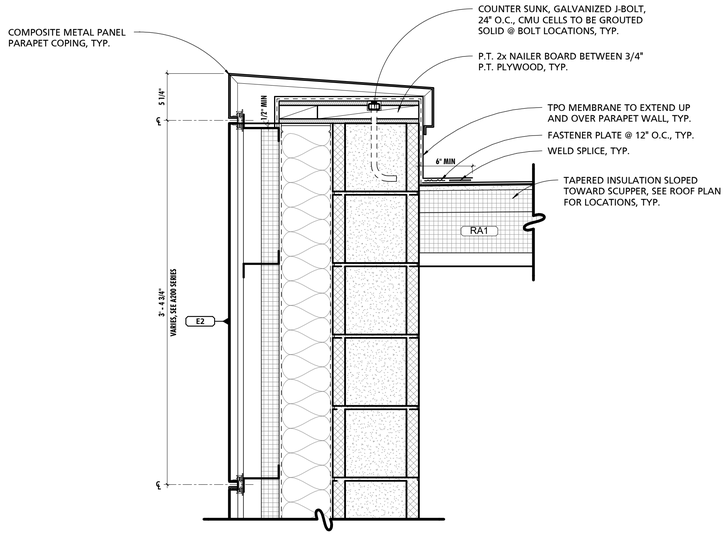


AXON AT STAIR TOWER TWO - (S02) & CURTAIN-WALL ONE - (CW-1)



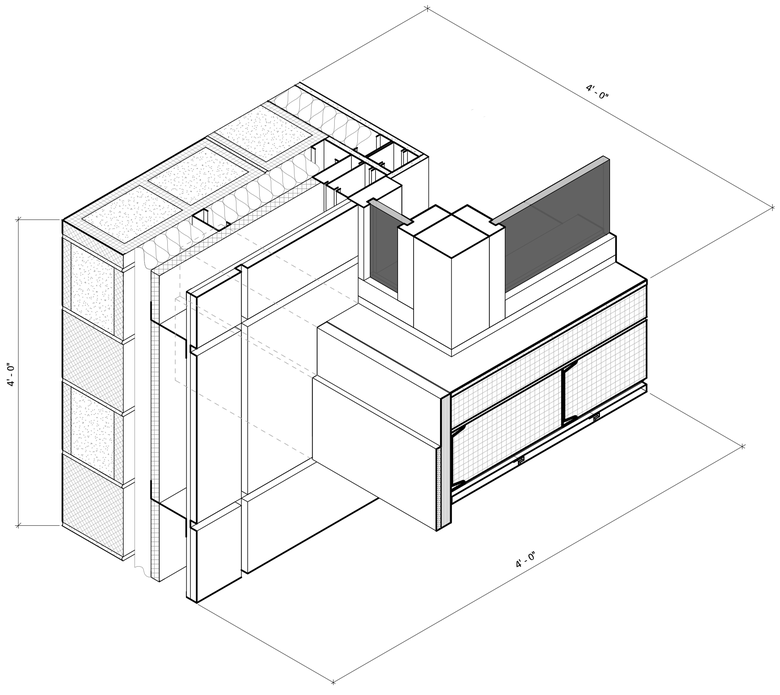
MOCK-UP - ONE

NOT TO SCALE



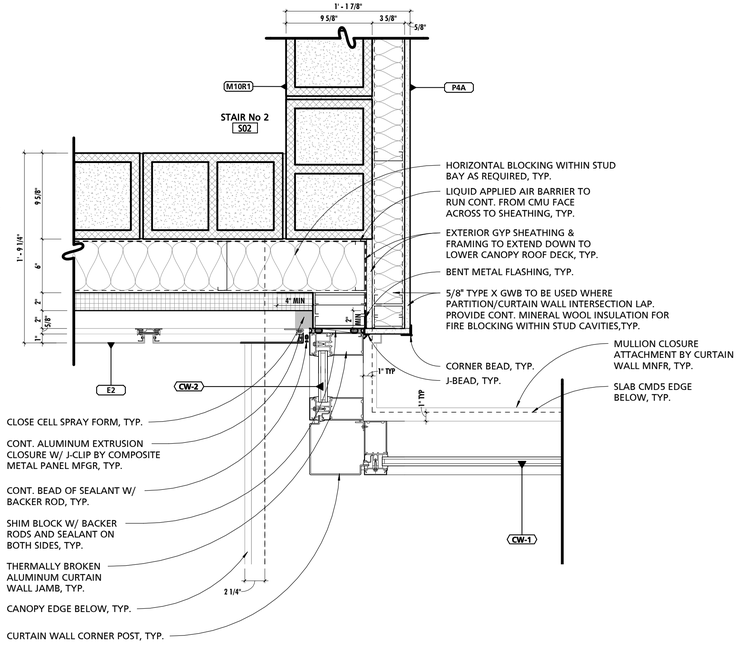
MOCK-UP -ONE - DETAIL

1 1/2" = 1'-0"



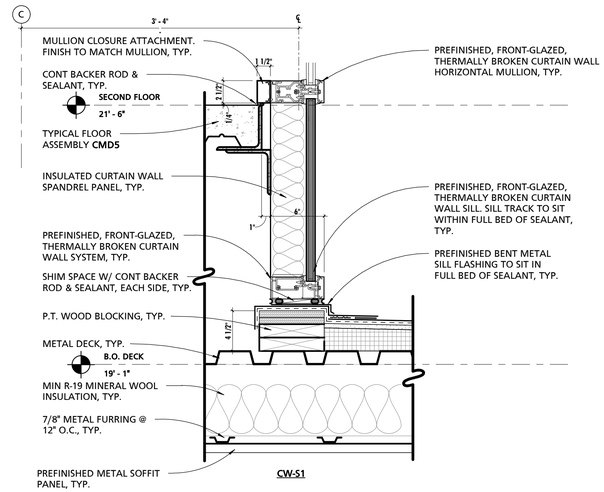
MOCK-UP - TWO

NOT TO SCALE



MOCK-UP - TWO - PLAN DETAIL

1 1/2" = 1'-0"



MOCK-UP - TWO - SILL DETAIL

1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

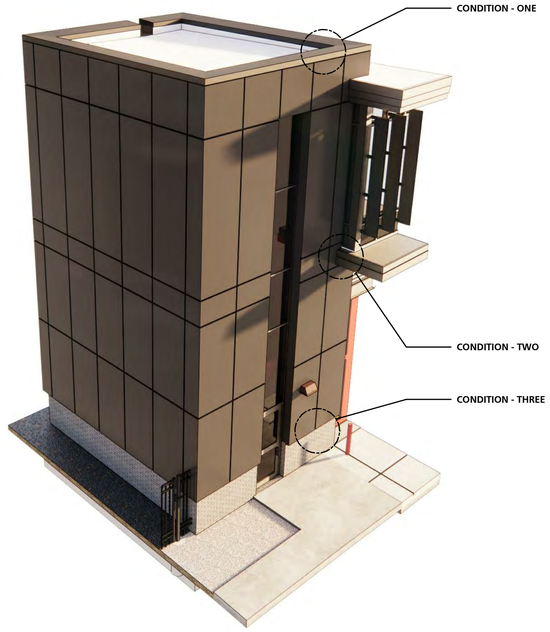
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

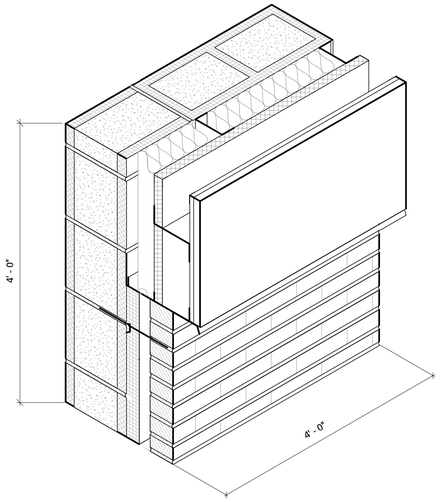
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 08/13/2021
DRAWING TITLE: MOCK-UP PANELS
SHEET NUMBER: A901

7/20/2021 11:45:42 AM

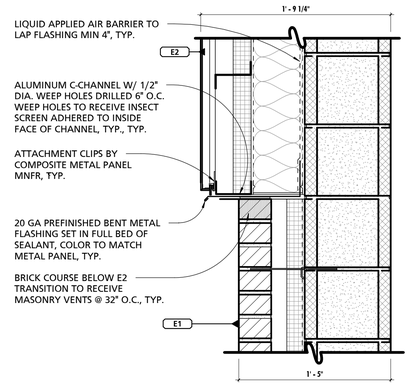


AXON AT STAIR TOWER TWO - (S02) & CURTAIN-WALL ONE - (CW-1)



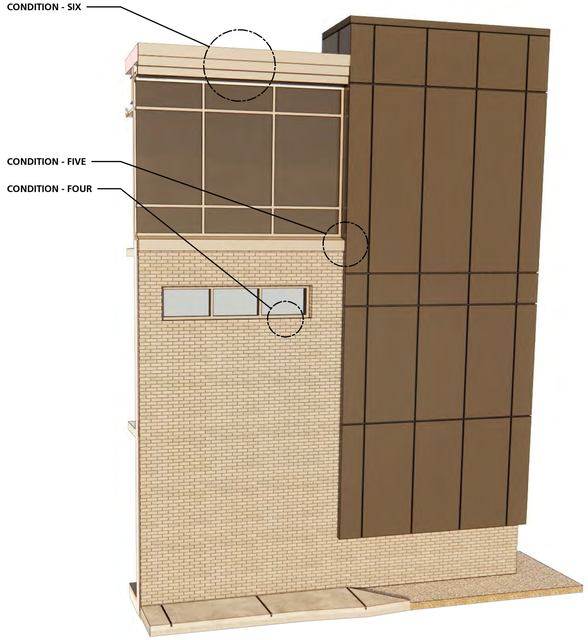
MOCK-UP THREE

NOT TO SCALE

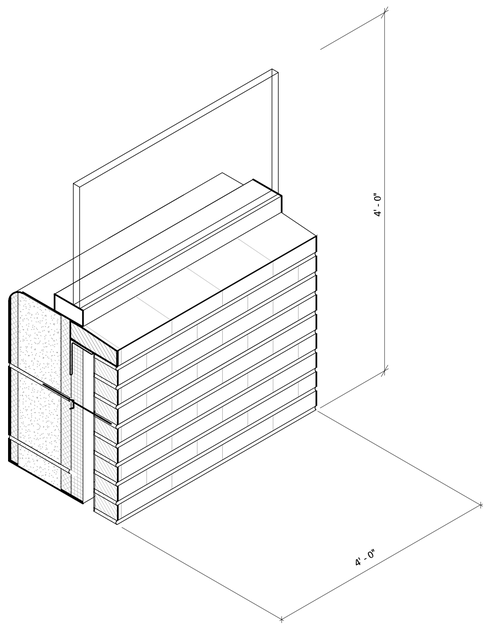


MOCK-UP THREE DETAIL

1 1/2" = 1'-0"

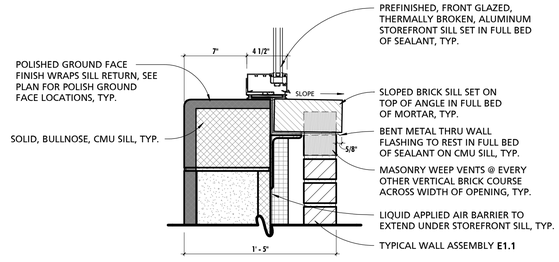


AXON AT STAIR TOWER TWO - (S03) & STOREFRONT SIX - (SF-6)



MOCK-UP - FOUR

NOT TO SCALE



6 MOCK-UP - FOUR - DETAIL

1 1/2" = 1'-0"

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

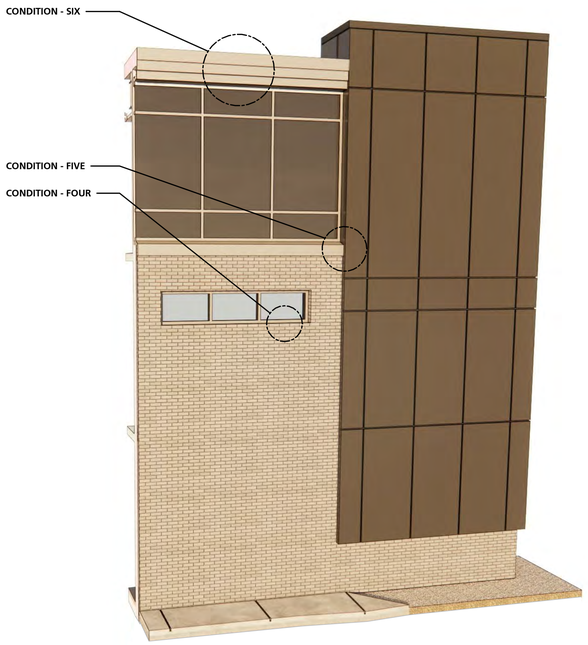
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

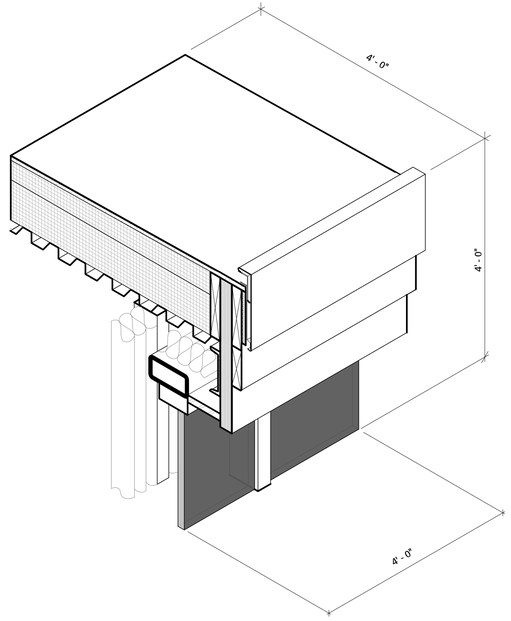
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: MOCK-UP PANELS
SHEET NUMBER: A902

7/20/2021 11:45:45 AM

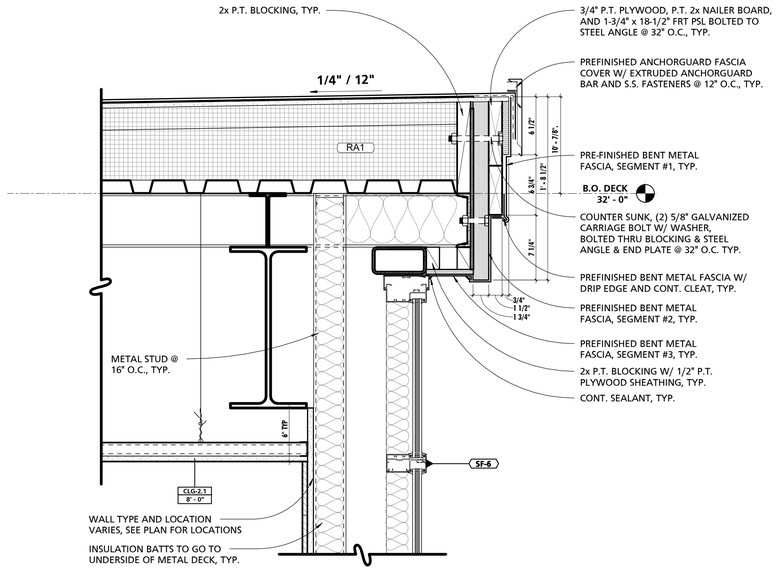


AXON AT STAIR TOWER TWO - (S03) & STOREFRONT SIX - (SF-6)



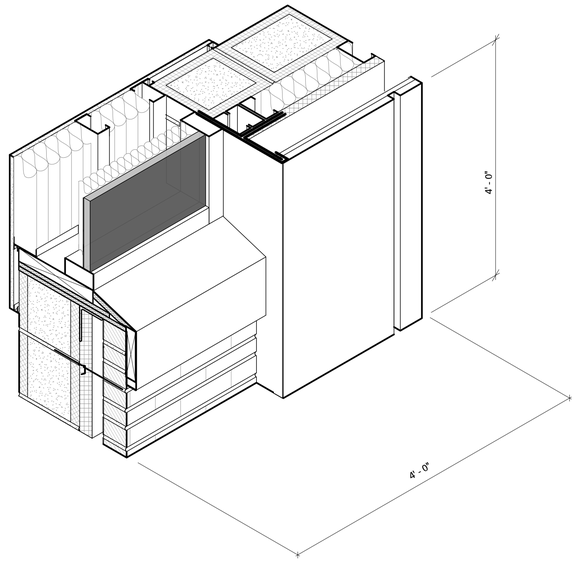
MOCK-UP - SIX

NOT TO SCALE



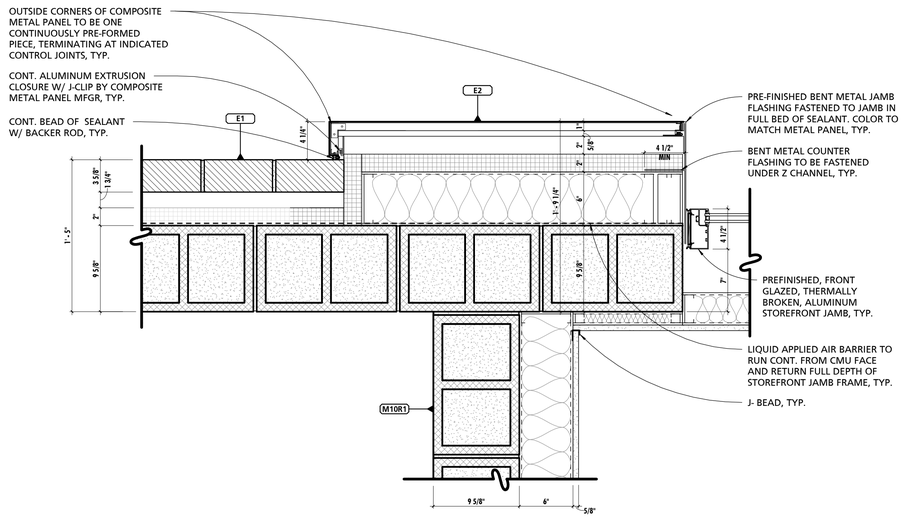
MOCK-UP - SIX - DETAIL

1 1/2" = 1'-0"



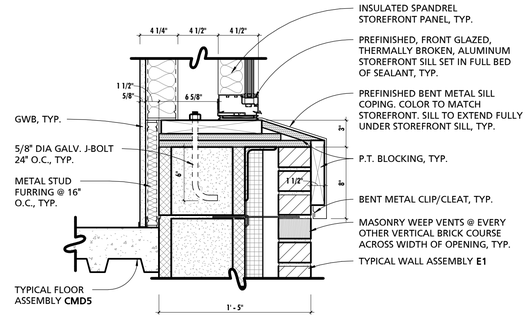
MOCK-UP - FIVE

NOT TO SCALE



MOCK-UP - FIVE - DETAIL

1 1/2" = 1'-0"



MOCK-UP - FIVE - SILL DETAIL

1 1/2" = 1'-0"

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SEAL:

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT A. WOODWARD RA405311

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: MOCK-UP PANELS
SHEET NUMBER: A903

7/20/2021 11:45:48 AM

Electrical Contractor Scope of Work:
1. Provide permit if needed
2. Provide wire
3. Provide wire runs per NFPA 70 code
4. All wire runs to be clearly tagged & labeled
5. Provide all wiring materials (hangars, conduit, surface mold,wire ties, boxes, etc…)
6. Provide high voltage electrical relay connections if needed
7. Provide other high voltage connections if needed
8. Provide electrical power where needed (dedicated/undedicated)
9. Provide complete system installation (including head end equipment)
10. Provide as-built drawings after installation
11. Provide 1 year of warranty on labor
12. Provide an on-site representative when final connections are made

Scope of Work:
1. Provide shop drawings of field devices
2. Provide system components
3. Provide technical support to electrical contractor
4. Provide all programming and calibrations
5. Provide end user training
6. Provide 1 year of system warranty

Wire Specifications:

Honeywell:

Non-Plenum

Product Number	Connectors	Color	Length
11251009	16/2 STR	Gray	1000'
11261009	16/4 STR	Gray	1000'
12145509	18/2 STR OAS	Gray	500'
11201009	18/6 STR	Gray	1000'
63602102	CAT6	Yellow	1000'
53921001	CAT6 OAS	White	1000'

Plenum

Product Number	Connectors	Color	Length
31211112	16/2 STR	White	1000'
31225512	16/4 STR	White	500'
32145512	18/2 STR OAS	Gray	500'
31165512	18/6 STR	Gray	500'
63611102	CAT6	Yellow	1000'
53921001	CAT6 OAS	White	1000'

Speaker Information:

Speaker Type	Common Wire Color	70V Wire Color	Wattage
8" Round CSS8008 Ceiling Speaker	Black	Brown	2.5
Exterior Loudspeaker		Switch Position 4	7.5
SM4T Bathroom Speaker		Rotary Switch w/ Jumper set to 70V	1.0
MB8TSL Metal Wall Mount Speaker	Black	Green	2.0
Soundsphere Speaker	Black	Purple	7.5

LED Speaker Type	Common Audio	70V Audio	LED Common Wire	LED Power
8" Round CSS8008 Ceiling Speaker	Black	Brown	Black	Red

Wire Length to leave in boxes for device connection: 16"

Wire Terminations:
CAT6 Cables = RJ45 Class B connections

Mounting heights: All are A.F.F. to bottom of the box
LCDs, LEDs, and power outlets - 80"
Apparatus Bay LCDs & power outlets - 95"
Volume Controls, Alert Selectors, Resets, & Who's In Reader - 48"
alerting controller – Dimensions 18" high, 15" wide, 4½" deep - 48 inches A.F.F.
Bogen #MB8STL wall mount speaker 11 5/8" X 11 5/8" - 78 inches A.F.F. to bottom of speaker
Exterior Speaker shall be hung under soffit where possible
Apparatus bay speakers to be hung 16' A.F.F.
Gas disconnect – located at the solenoid

Device Wire Size
All speakers (except LED speakers), and LED Clusters =16/2 STR
Reset Buttons, Doorbells = 18/2 STR OAS
LED Speakers, Volume Controls = 16/4 STR
Stove Resets = 18/2 STR OAS & 16/2 STR
Gas Shutoffs and Stove Shutoffs = 16/2 STR
Stacklights = 18/6 STR
Toggle Alert Selectors = 16/4 STR or 16/2 STR
Momentary Alert Selectors = 18/2 STR OAS, one wire per button on the gang plate
CAD LCD Displays, Notifier Modules, and Scrolling LEDs = Cat6 (not to exceed 300')
RIB Relays (Lighting) = 16/2 STR
Who's In Main Reader – Cat6
Who's In Remote Reader – 22/6

Zones:
All devices in the following areas need to be zoned as follows:

Homeruns from the following general areas:
Bunkrooms, Common Areas, Apparatus Bay, Exterior Speakers

Supplied Drawings take precedence over the above

Reqiured boxes:

35w volume control – Double gang 3" deep box
10w volume control – Single gang 3" deep box
Reset button – Single gang 3" deep box
Alert selector – Single gang 3" deep box
Stove reset – Single gang 3" deep box
Doorbells- Single gang 3" deep box
Who's In Remote Reader - Double gang 3" deep box

GENERAL NOTES:

1. THE DIAGRAMS AND SPECIFICATIONS ARE NOT INTENDED TO BE LIMITING OR RESTRICTIVE TO A PARTICULAR VENDOR. HOWEVER, DUE TO THE COORDINATION REQUIRED AND OPERATIONAL FUNCTIONALITY OF THE SYSTEMS, A BASIS OF DESIGN PRODUCT(S) WAS CHOSEN TO BE DESIGNED AND ENGINEERED AROUND. DUE TO THE COMPLEXITIES AND INTEGRATION OF THE SYSTEMS CHOSEN IT WILL BE THE RESPONSIBILITY OF ANY OTHER VENDOR/MANUFACTURER OF A COMPARABLE SYSTEM OR PRODUCT TO BARE THE COSTS AND RESPONSIBILITIES ASSOCIATED WITH ANY AND ALL RE-ENGINEERING OR RE-DESIGNING REQUIRED AS A RESULT OF UTILIZING THE COMPARABLE SYSTEM. THESE COSTS MAY INCLUDE BUT ARE NOT LIMITED TO, A/E FEES AND ASSOCIATED COSTS, MATERIAL, AND LABOR FOR ADDITIONAL UPGRADES TO ANY BUILDING SYSTEMS REQUIRED, AND MATERIAL AND LABOR COSTS FOR ADDITIONAL CONSTRUCTION REQUIRED.

IF A PROSPECTIVE COMPUTER AIDED DISPATCH SYSTEM VENDOR WISHES TO PROVIDE ALTERNATE SYSTEMS TO THE ONES LISTED HEREIN, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE OWNER'S TECHNICAL REPRESENTATIVE. REQUESTS SHALL BEE SUBJECT TO THE REQUIREMENTS OF THE PROCUREMENT SUBSTITUTION PROCEDURES SECTION OF THE SPECIFICATIONS.

2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3. ALL EXPOSED UTILITIES, CAD ALERTING DEVICES, IN ADDITION BUT NOT LIMITED TO, PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.

4. ELECTRICAL PRIME TO PROVIDE ALL ELECTRICAL WIRING INCLUDING TO BUT NOT LIMITED TO, GENERAL POWER SUPPLY, LOW VOLTAGE COMMUNICATIONS, A/V, DATA WIRING/CABELING, AND ALL WIRING ASSOCIATED WITH THE BUILDING ACCESS CONTROL SYSTEM, CAD ALERTING SYSTEM, AND CCTV SYSTEM TO BE RUN IN EXPOSED AREAS THROUGH THE FIRST FLOOR CEILING, MEZZANINE CEILINGS, UNDERSIDE OF MEZZANINE DECK, FITNESS 230, AND ALL ROOMS TO RECIEVE CLG-5 SHALL BE IN METAL CONDUIT PAINTED TO MATCH DECK ABOVE.

5. ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1. ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.

CONTROLLER WIRING

INPUTS

I1 = RF ALERT
I2 = RF ALERT
I3 = RF ALERT
I4 = RF ALERT
I5 = NOT USED
I6 = NOT USED
I7 = NOT USED
I8 = NOT USED
I9 = NOT USED
I10 = COUNTY EMERGENCY PHONE
I11 = FITNESS EMER BUTTON
I12 = NOT USED
I13 = NOT USED
I14 = STOVE RESET
I15 = AC SUPERVISORY
I16 = BATTERY SUPERVISORY

OUTPUTS

O1 = APPARATUS BAYS
O2 = 1ST FLOOR LIVING
O3 = 2nd FLOOR COMMON
O4 = 2ND FLOOR BUNKS
O5 = 2nd FLOOR LIVING
O6 = NOT USED
O7 = NOT USED
O8 = ALERT SELECTOR 1
O9 = ALERT SELECTOR 2
O10 = ALERT SELECTOR 3
O11 = NOT USED
O12 = NOT USED
O13 = PHONE PAGING ADAPTER
O14 = EXTERIOR SPEAKERS (DRY CONTACT)
O15 = Supervisory Relay
O16 = Stove Disconnect
O17 = Stove Disconnect Lamp

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: COVER SHEET
SHEET NUMBER: AL - 100

7/20/2021 11:45:49 AM

A. General Requirements

1. All work shall be performed in accordance with national, State and local electrical and/or building codes.

2. All critical components of the System shall be supported by an uninterruptible power supply.

3. The System shall be capable of providing a scalable fire station alerting system that is compatible with non-proprietary industry standard products.

B. NFPA 1221 Compliance

1. The System's components, control, and operation shall comply with NFPA 1221 as it applies to a standalone fire station alerting system.

2. The System and its components shall comply with NFPA 1221 when a dispatch server and station controller are implemented.

3. Redundancy to computer aided dispatch (CAD) alerting shall be implemented and utilized in the event of a CAD data delivery failure.

C. Computer Aided Dispatch Integration

1. The System shall interface with the customer's CAD system.

2. Samples of CAD alert output
   Incident Number: 1234567....
   Type: Medical
   Priority: 2
   Units: A19 A58
   Date: 10/11/16 08:52
   Box: 111
   Location Name: Walmart...
   Address: 960 Sea Shell Ct
   City: North Beach
   XST: Main St and North Ave.....
   Remarks: subject 250pd alarm.....

3. The System shall be capable of supporting all dispatch messages and general announcements.

4. The System shall have the capability to display CAD incident data (units assigned, incident type, location) to a color display (minimum 24-inch diagonal) located at customer required locations in each fire station. The System displays shall be capable of showing a minimum of four panes of non-emergency information. Upon alert, a separate emergency pane shall automatically display, overriding the non-emergency information.

D. System Monitoring and Recording

1. The System shall monitor critical power sources. Automatic visual, electronic notification and time-stamped logs shall be generated for loss of critical power and network connections.

2. All alarm transmissions shall be recorded and archived to include date and time of the alarm and be available on the display.

3. System monitored faults or failurs shall notify visually and audibly in a prominent fashion that satisfies the visual trouble requirements.

4. The System shall be capable of remotely alerting both customer and vendor support staff of critical events that occur within the alerting system via email, SMS text, or audiovisual annunciation.

5. System controller(s) shall visually and audibly notify fire station personnel of System trouble. The visual trouble indicator shall be located in a common area of the fire station.

E. Radio Dispatch

1. The System shall automatically generate an audible dispatch announcement that shall include units assigned, incident type, and incident location.

2. The voice announcement should be human-like, non-synthesized, non-robotic, and easily understood. A sample of voice announcements shall be provided upon request.

3. The System voice database shall have the ability to be upgraded as needed.

4. The System shall have the ability to transmit a specific alert tone generated through the station alerting system based on the unit type.

F. Fire Station Activation

1. The System shall receive CAD data via SMTP, TCP/IP or linked database servers. The System shall have remote access via port forwarding or VPN tunnel for system updates / troubleshooting.

2. The System shall have the ability to manually control alerting functions in the event of loss of the CAD link or CAD server.

3. The System shall provide the ability to provide priority to the System alert audio during dispatch alerts.

4. The System shall be a modular design providing a minimum of 16 inputs and 16 outputs to monitor and control external and switched functions. The System shall provide for the control of multiple zones and system resets. The System shall be able to interface with door access, traffic control devices, high voltage lighting and other equipment or appliances.

5. The System shall be capable of displaying non-emergency information on displays that include weather, incident history, last incident information and announcements. The System shall also display emergency incident CAD information on dispatch alert.

6. The customer shall provide each fire station with a dedicated base station radio and speaker for monitoring the primary dispatch audio. Each base radio shall be connected to a station public address amplifier whose sole purpose is for the broadcast of a dispatch, nonemergency or general announcements. The System solution shall be able to provide audio through the fire station public address system only when activated for the specific station and certain zones of that station.

7. The System shall provide an audible alert tone and can separately identify the units and incident type that is being dispatched. The System shall be able to support a minimum of six customized tones so that different tones can be used to indicate the individual unit for the alert notification. The System shall be capable of announcing the incident address as an option.

G. Fire Station Alerting

1. Speakers

   a. Commercial, non-proprietary ceiling (with ceilng bridge assemblies) and wall-mounted speakers shall be provided for audible alerting over the fire station's public address system. Speaker shall provide 70V Taps (5W, 2.5W, 1.3W, 0.7W) External speakers shall be capable of being controlled through a timing circuit.

   b. Speakers shall produce a clear, understandable sound (voice and tone) throughout the space for the area where it is installed.

   c. Omni-directional speakers shall be used for interior apparatus bay audio. These speakers shall be capable of being hung directly from the ceiling and can be used to distribute clean audio to an entire apparatus bay.

2. Relay Controls and Inputs

   a. The System shall provide a minimum of 16 inputs and 16 relay contacts for the purpose of controlling external switched functions. These relays shall be able to be energeized for a configurable period of time upon receipt of an alert. The outputs shall be configurable as normally open or normally closed contact closures.

3. Appliance Controls

   a. The System shall be able to provide relay contact closure to control gas or electric stoves, ovens, and other user defined appliances when an alert is received.

4. Doorbells

   a. The System shall be capable of connecting doorbells that will announce the location over the fire station's public address system.

5. Room and Area Selector Switches

   a. The System shall be capable of providing an alert selector mounted in a single-gang box to allow station personnel to appropriately zone the alerting for their room or area. The alert selector shall be able to select from one to six types of alerts.

6. Volume Control

   a. The System shall be configurable for time-of-day (day/night) control.

   b. The System shall be capable of sensing ambient noise to automatically adjust the speaker volume for noise compensation if required by the customer.

   c. All volume controls shall include an override relay that will provide maximum volume when there is an alert. Volume controls shall be in 10-watt (single gang) or 35-watt (double gang) boxes.

7. LED and Other Lighting

   a. The System shall provide for a variety of LED visual alert lighting. A minimum of five colors shall be available that will be associated with different apparatus alerting requirements. The basic colors that shall be provided are: green, red, blue, amber, and purple.

   b. A LED lighting cluster shall be provided as required. The LED cluster shall be capable of being ceiling or wall-mounted. The LED cluster will include a 5-second ramp up function.

   c. A LED speaker light shall be provided as required. The LED speaker light shall include one, 12VDC LED light fixture to be activate during an alert. The LED speaker light shall include multiple wattage 25V/70V speaker taps and include a 5-second ramp up function.

   d. A multi-colored custom alerting LED light shall be provided as required. The LED light shall be capable of cycling through a custom set of colors associated with specific apparatus alerting. This light shall be capable of being ceiling or wall-mounted and connected to the System using CAT5 PoE.

   e. The System shall provide for the use of individual colored strobe or modular stack lighting that is customizable based upon customer requirements. Strobe lighting colors shall be available in Red, Blue, Yellow, or Clear. Stack lighting colors shall be available in Green, Red, Blue, Amber, or Clear.

8. Visual Displays

   a. The System shall have the capability to display emergency and non-emergency information on LCD displays. The size and location of the LCD displays shall be specified by the customer.

   b. Non-emergency information that shall be displayed will include: incident history, announcements, weather mapping, and last incident dispatched information. The System shall have the capability to display advanced and custom non-emergency information to include: weather and traffic information, IP cameras (station or highway cameras), global panes that can be shared among multiple stations, and shared panes where information can be entered manually and shared with all stations. Non-Emergency screens shall be capable of displaying up to six panes of standard or customized information.

   c. Emergency information that is provided by the customer's CAD system and required by the customer shall be displayed. The System shall be capable to display advanced emergency information such as: response mapping with geocoding and water sources and road closures. Emergency screens shall be capable of being manually programmed to time-out after a customer determined time period and return to non-emergency display status.

   d. Single or multi-line LED displays shall be capable of displaying emergency alert or non-emergency information. LED displays shall be capable of displaying a custom static message.

9. Fire Station Zoning

   a. The System shall provide for fire station zoning such that portions of a fire station can be alerted without alerting the entire fire station.

10. Alerting Resets

   a. The System shall have the ability to provide a means to reset all station speakers or zones, lighting and relay activation, while maintaining he ability to be overridden by the receipt of a subsequent dispatch alert.

   b. All reset switches shall be identifiable with a custom label.

H. Alerting System Configuration

1. The System shall be centrally managed. Both the vendor and the customer's administrors shall have full control access.

2. Authorized administrators shall be able to control, configure and update the System on a browser from any web-enabled device. In addition, manual alerting shall be available from a browser from any web-enabled device.

I. Training and System Manuals

1. System maintenance, programming and troubleshooting training shall be provided for the customer's technical staff.

2. Digital copies of all technical documents, user manuals, and any training materials required for the operation of the System shall be provided.

J. Components

1. Preference will be given to the solution that allows for the easiest upgrading, replacement, and adding of components. Equipment shall be non-proprietary for ease of replacement.

2. Any electronic components such as servers, amplifiers, and other similar equipment shall have the ability to be mounted in a rack.

3. All field devices shall be available for replacement within 24 hours by department or qualified personnel.

K. Warrenties and Support Aggrements

1. Describe warranty provided as well as length of warranty.

2. Describe extended yearly warranties available and their cost.

3. Specify your twenty-four hour a day, seven days a week software support capabilities.

4. Specify your eight hours a day, five days a week software support capabilities. Specify in pricing sheet, pricing for single year support and for five-year support.

L. Training

1. System maintenance, programming and trouble-shooting training shall be provided for the customer's technical staff.

GENERAL NOTES:

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IF A PROSPECTIVE COMPUTER AIDED DISPATCH SYSTEM VENDOR WISHES TO PROVIDE ALTERNATE SYSTEMS TO THE ONES LISTED HEREIN, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE OWNER'S TECHNICAL REPRESENTATIVE. REQUESTS SHALL BEE SUBJECT TO THE REQUIREMENTS OF THE PROCUREMENT SUBSTITUTION PROCEDURES SECTION OF THE SPECIFICATIONS.

2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3. ALL EXPOSED UTILITIES, CAD ALERTING DEVICES, IN ADDITION BUT NOT LIMITED TO, PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

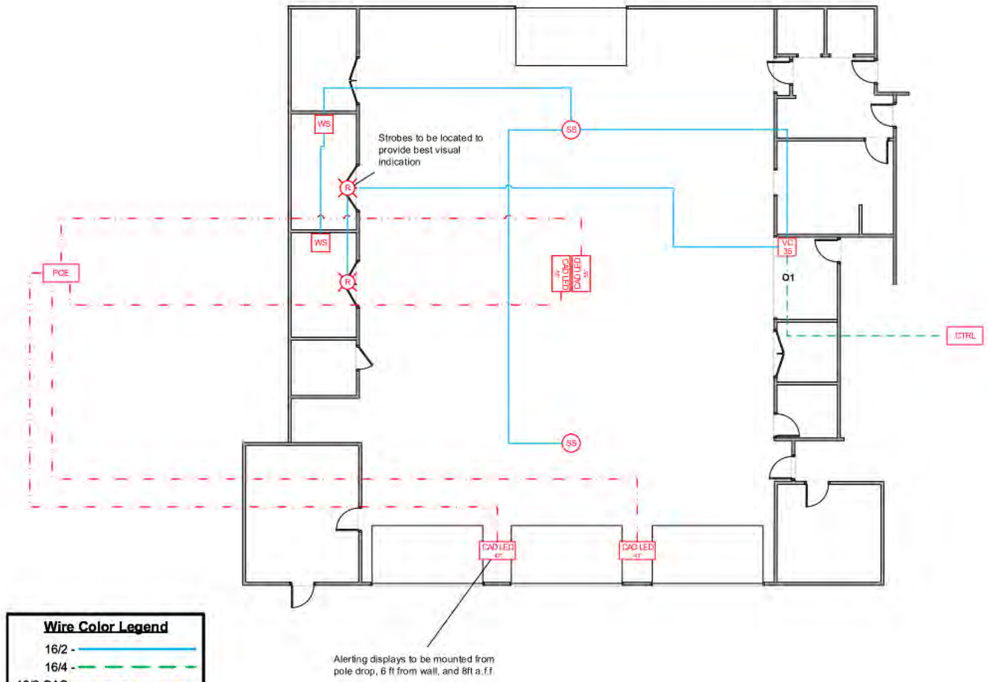
CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

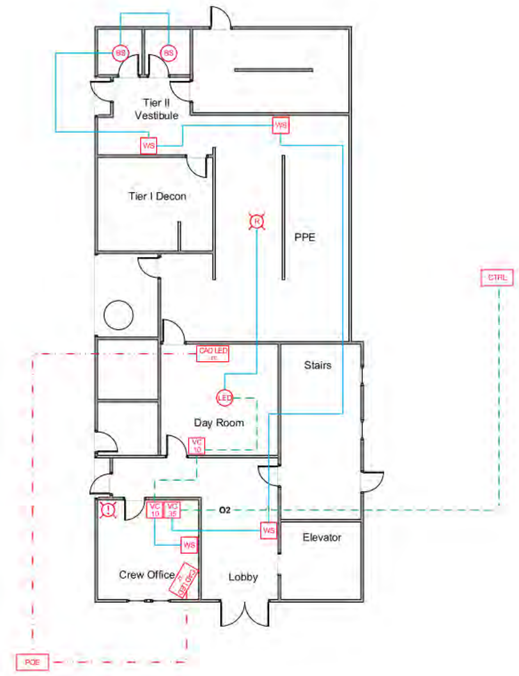
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: GENERAL REQUIREMENTS
SHEET NUMBER: AL - 101

7/20/2021 11:45:50 AM



Wire Color Legend

16/2 -
16/4 -
18/2 OAS -
18/6 -
Cat6 -
22/6 -



Device		Mount
VC 10 / VC 35	Volume Control 10 / 35 Watt	48" AFF
BS	Bathroom Speaker, 1.0 Watt	Ceiling
WS	Wall Speaker, 2.0 Watt	78" AFF
LED	8" LED Ceiling Speaker, 2.5 Watt	Ceiling
B / B	Colored LED Strobe	Ceiling
POE	PoE Switch	Rack
CAD LED 42"	CAD 43/55" LED Display	See Notes
H	FHA Trouble Strobe	Ceiling
CTRL	Alerting Controller	Rack

NOTE: DIAGRAMS ARE NOT TO SCALE.

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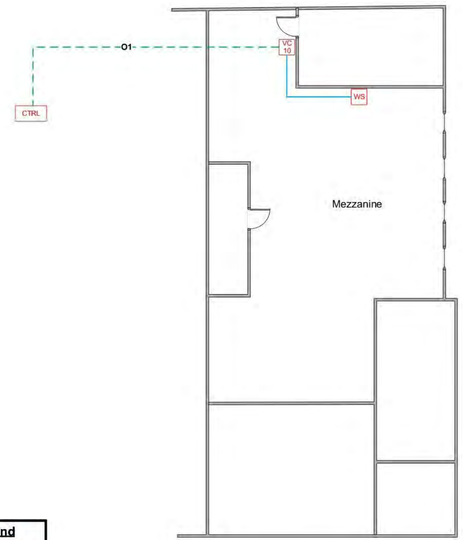

Device		Mount
VC 10 / VC 35	Volume Control 10 / 35 Watt	48" AFF
WS	Wall Speaker, 2.0 Watt	78" AFF
CTRL	Alerting Controller	Rack

Wire Color Legend

16/2 -
16/4 -
18/2 OAS -
18/6 -
Cat6 -
22/6 -

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

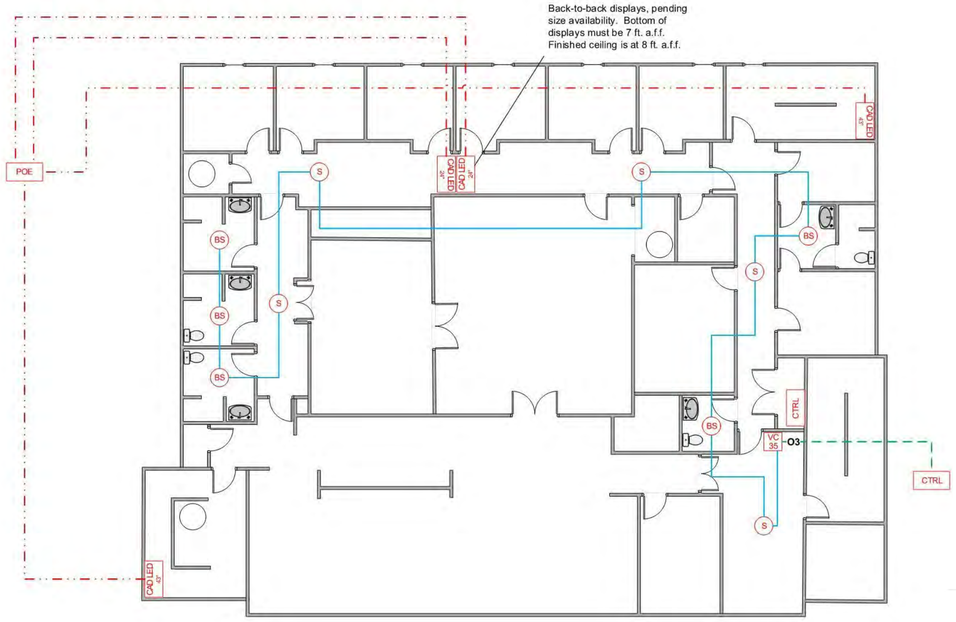
CONSULTANT:

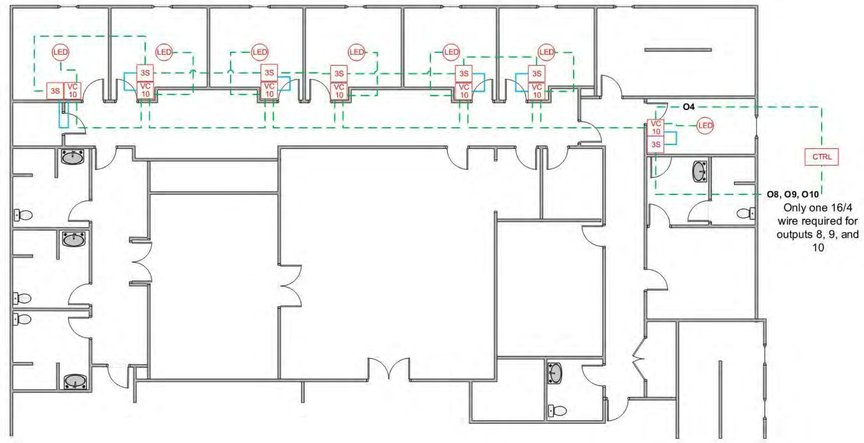
READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FIRST FLOOR & MEZZ. WIRING DIAGRAMS
SHEET NUMBER: AL - 102

7/20/2021 11:45:51 AM





	Device	Mount
	Doorbell	48" AFF
VC 10 / VC 3S	Volume Control 10 / 35 Watt	48" AFF
3S	3 Button Alert Selector	48" AFF
2A	2 Button Manual Alert	48" AFF
!	County Emergency Phone	Per County
	Reset Button	48" AFF
	Stove Reset	48" AFF
	Stove Disconnect	Located at Solenoid
S	8" 70V Speaker, 2.5 Watt	Ceiling
BS	Bathroom Speaker, 1.0 Watt	Ceiling
WS	Wall Speaker, 2.0 Watt	78" AFF
SS	Omnidirectional, 7.5 Watt	192" AFF
ES	External Speaker, 7.5 Watt	Under Soffit
LED	8" LED Ceiling Speaker, 2.5 Watt	Ceiling
R B	Colored LED Strobe	Ceiling
	Red LED Cluster Light	Ceiling
4 S L	Stacklights	Ceiling/ Wall
POE	PoE Switch	Rack
	RIB Relay	Above Ceiling
CAD LED 43"	CAD 43/55" LED Display	78" AFF* See FHA Notes
FAST	FAST Server	Rack
!	FHA Trouble Strobe	Ceiling
CTRL	Alerting Controller	Rack

Wire Color Legend

16/2 -
16/4 -
18/2 OAS -
18/6 -
Cat6 -
22/6 -

GENERAL NOTES:

1. THE DIAGRAMS AND SPECIFICATIONS ARE NOT INTENDED TO BE LIMITING OR RESTRICTIVE TO A PARTICULAR VENDOR. HOWEVER, DUE TO THE COORDINATION REQUIRED AND OPERATIONAL FUNCTIONALITY OF THE SYSTEMS, A BASIS OF DESIGN PRODUCT(S) WAS CHOSEN TO BE DESIGNED AND ENGINEERED AROUND. DUE TO THE COMPLEXITIES AND INTEGRATION OF THE SYSTEMS CHOSEN IT WILL BE THE RESPONSIBILITY OF ANY OTHER VENDOR/MANUFACTURER OF A COMPARABLE SYSTEM OR PRODUCT TO BARE THE COSTS AND RESPONSIBILITIES ASSOCIATED WITH ANY AND ALL RE-ENGINEERING OR RE-DESIGNING REQUIRED AS A RESULT OF UTILIZING THE COMPARABLE SYSTEM. THESE COSTS MAY INCLUDE BUT ARE NOT LIMITED TO, A/E FEES AND ASSOCIATED COSTS, MATERIAL, AND LABOR FOR ADDITIONAL UPGRADES TO ANY BUILDING SYSTEMS REQUIRED, AND MATERIAL AND LABOR COSTS FOR ADDITIONAL CONSTRUCTION REQUIRED.

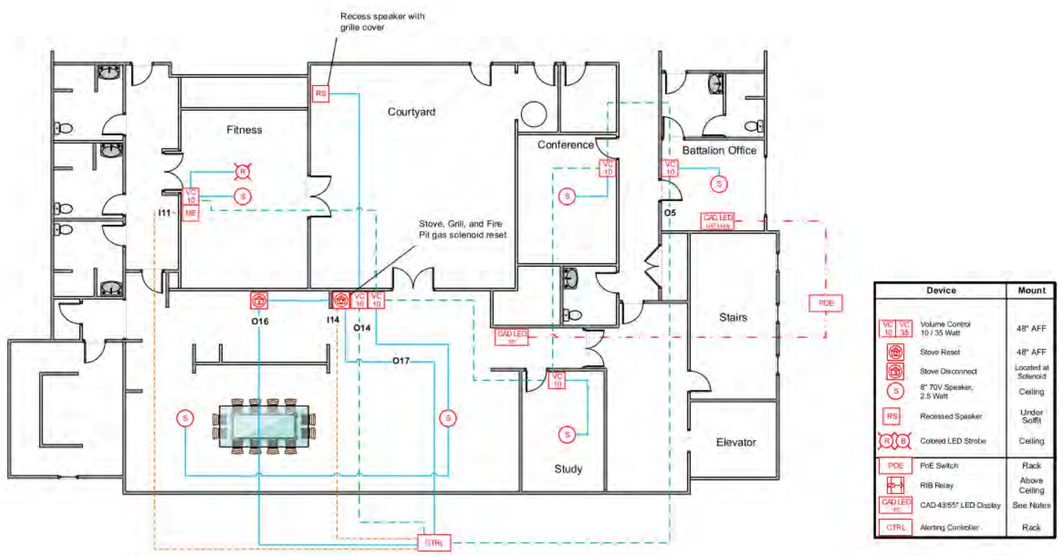
IF A PROSPECTIVE COMPUTER AIDED DISPATCH SYSTEM VENDOR WISHES TO PROVIDE ALTERNATE SYSTEMS TO THE ONES LISTED HEREIN, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE OWNER'S TECHNICAL REPRESENTATIVE. REQUESTS SHALL BEE SUBJECT TO THE REQUIREMENTS OF THE PROCUREMENT SUBSTITUTION PROCEDURES SECTION OF THE SPECIFICATIONS.

2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3. ALL EXPOSED UTILITIES, CAD ALERTING DEVICES, IN ADDITION BUT NOT LIMITED TO, PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.

4. ELECTRICAL PRIME TO PROVIDE ALL ELECTRICAL WIRING INCLUDING TO BUT NOT LIMITED TO, GENERAL POWER SUPPLY, LOW VOLTAGE COMMUNICATIONS, A/V, DATA WIRING/CABELING, AND ALL WIRING ASSOCIATED WITH THE BUILDING ACCESS CONTROL SYSTEM, CAD ALERTING SYSTEM, AND CCTV SYSTEM TO BE RUN IN EXPOSED AREAS THROUGH THE FIRST FLOOR CEILING, MEZZANINE CEILINGS, UNDERSIDE OF MEZZANINE DECK, FITNESS 230, AND ALL ROOMS TO RECIEVE CLG-5 SHALL BE IN METAL CONDUIT PAINTED TO MATCH DECK ABOVE.

5. ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1. ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.



	Device	Mount
VC 10 / VC 3S	Volume Control 10 / 35 Watt	48" AFF
	Stove Reset	48" AFF
	Stove Disconnect	Located at Solenoid
S	8" 70V Speaker, 2.5 Watt	Ceiling
RS	Recessed Speaker	Under Soffit
R B	Colored LED Strobe	Ceiling
POE	PoE Switch	Rack
	RIB Relay	Above Ceiling
CAD LED 48"	CAD 43/55" LED Display	See Notes
CTRL	Alerting Controller	Rack

Wire Color Legend

16/2 -
16/4 -
18/2 OAS -
18/6 -
Cat6 -
22/6 -

Notes:

- Strobes in fitness room to be located for best visual notification. Can be ceiling or wall mounted.
- Vendor provided Stove Reset and RIB style relays can control kitchen stove, outside grill, and fire pit. Appropriate subs will provide gas solenoids and electrical circuits to connect 12V APS alerting controller relays.

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SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. LICENSE NUMBER: #RA405311 EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR WIRING DIAGRAM

SHEET NUMBER: AL - 103

7/20/2021 11:45:53 AM

GENERAL NOTES:

1. THE DIAGRAMS AND SPECIFICATIONS ARE NOT INTENDED TO BE LIMITING OR RESTRICTIVE TO A PARTICULAR VENDOR. HOWEVER, DUE TO THE COORDINATION REQUIRED AND OPERATIONAL FUNCTIONALITY OF THE SYSTEMS, A BASIS OF DESIGN PRODUCT(S) WAS CHOSEN TO BE DESIGNED AND ENGINEERED AROUND. DUE TO THE COMPLEXITIES AND INTEGRATION OF THE SYSTEMS CHOSEN IT WILL BE THE RESPONSIBILITY OF ANY OTHER VENDOR/MANUFACTURER OF A COMPARABLE SYSTEM OR PRODUCT TO BARE THE COSTS AND RESPONSIBILITIES ASSOCIATED WITH ANY AND ALL RE-ENGINEERING OR RE-DESIGNING REQUIRED AS A RESULT OF UTILIZING THE COMPARABLE SYSTEM. THESE COSTS MAY INCLUDE BUT ARE NOT LIMITED TO, A/E FEES AND ASSOCIATED COSTS, MATERIAL, AND LABOR FOR ADDITIONAL UPGRADES TO ANY BUILDING SYSTEMS REQUIRED, AND MATERIAL AND LABOR COSTS FOR ADDITIONAL CONSTRUCTION REQUIRED.

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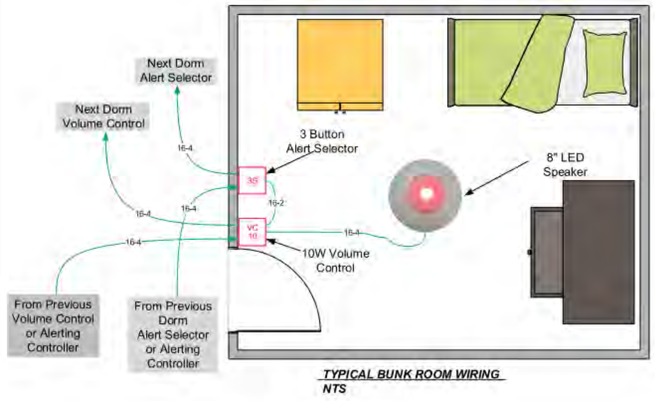
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3. ALL EXPOSED UTILITIES, CAD ALERTING DEVICES, IN ADDITION BUT NOT LIMITED TO, PIPES, DUCTS, CONDUITS, WORK BOXES, DEVICES, AND OTHER ASSOCIATED UTILITY ITEMS MOUNTED ABOVE CLG-5 SHALL BE PAINTED TO MATCH CEILING OR HAVE A MATCHING FACTORY FINISH. MECHANICAL, PLUMBING, ELECTRICAL, AND GENERAL CONTRACTORS SHALL PROVIDE CORDINATED SHOP DRAWINGS OF ALL MEP RELATED ITEMS AND ASSOCIATED MOUNTING HEIGHTS THAT ARE TO OCCUR WITHIN CLG-5 AREA.

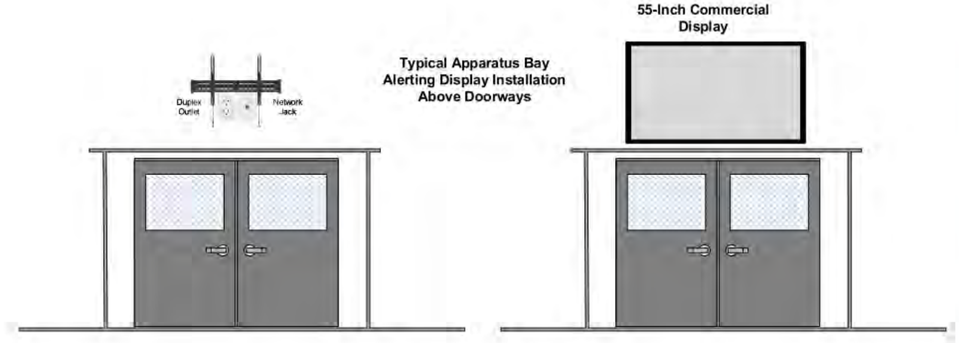
4. ELECTRICAL PRIME TO PROVIDE ALL ELECTRICAL WIRING INCLUDING TO BUT NOT LIMITED TO, GENERAL POWER SUPPLY, LOW VOLTAGE COMMUNICATIONS, A/V, DATA WIRING/CABELING, AND ALL WIRING ASSOCIATED WITH THE BUILDING ACCESS CONTROL SYSTEM, CAD ALERTING SYSTEM, AND CCTV SYSTEM TO BE RUN IN EXPOSED AREAS THROUGH THE FIRST FLOOR CEILING, MEZZANINE CEILINGS, UNDERSIDE OF MEZZANINE DECK, FITNESS 230, AND ALL ROOMS TO RECIEVE CLG-5 SHALL BE IN METAL CONDUIT PAINTED TO MATCH DECK ABOVE.

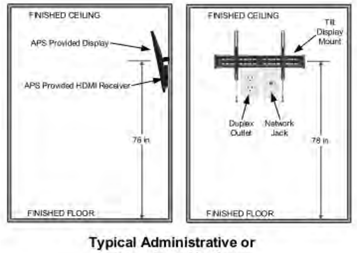
5. ALL EXPOSED CMU WALL SURFACES IN THE FOLLOWING ROOMS SHALL BE FREE OF ANY SURFACE MOUNTED MECHANICAL, ELECTRICAL OR PLUMBING UTILITIES, INCLUDING BUT NOT LIMITED TO CAD ALERTING SYSTEM DEVICES, ACCESS CONTROL DEVICES, CCTV DEVICES, IT RELEATED DEVICES, BUILDING COMMUNICATIONS AND A/V RELATED DEVICES: LOBBY 101, CREW OFFICE 102, STAIR No1 S01, CORRIDOR 116, DAYROOM 115, TOILET 108, EMS STORAGE 109, TURN OUT GEAR 113, TIER I DECON 114, TIER II VESTIBULE 112, STAIR No3 S03, TIER II SHOWER 110 & 111, APPARATUS BAY 103, GROUND STORAGE 107, SCBA 106, FIRE STORAGE 105, STAIR No2 S02, POLE MEZZANINE 200.2, CORRIDOR 201, POLE 219.1, MECHANICAL / TRAINING MEZZANINE 200.1. ALL CONDUITS, RACEWAYS, SUPPLY LINES, VENTS, & SANITARY LINES SHALL BE EMBEDED WITHIN CMU WALLS & TERMINATE TO RECESSED BOXES OR THEIR ASSOCIATED FIXTURES.



TYPICAL BUNK ROOM WIRING
NTS

Device	Mount
Doorbell	48" AFF
VC 10 / VC 35 Volume Control 10 / 35 Watt	48" AFF
3S 3 Button Alert Selector	48" AFF
2A 2 Button Manual Alert	48" AFF
County Emergency Phone	Per County
Reset Button	48" AFF
Stove Reset	48" AFF
Stove Disconnect	Located at Solenoid
8" 70V Speaker, 2.5 Watt	Ceiling
BS Bathroom Speaker, 1.0 Watt	Ceiling
WS Wall Speaker, 2.0 Watt	78" AFF
OS Omnidirectional, 7.5 Watt	192" AFF
ES External Speaker, 7.5 Watt	Under Soffit
LED 8" LED Ceiling Speaker, 2.5 Watt	Ceiling
R B Colored LED Strobe	Ceiling
Red LED Cluster Light	Ceiling
R A B Stacklights	Ceiling/ Wall
POE PoE Switch	Rack
RIB Relay	Above Ceiling
CAD LED 43" CAD 43/55" LED Display	78" AFF*
FAST FAST Server	Rack
FHA Trouble Strobe	Ceiling
APS APS IP Controller System	Rack





Typical Administrative or Living Area Alerting Display Mounting

Device	Mount
Doorbell	48" AFF
VC 10 / VC 35 Volume Control 10 / 35 Watt	48" AFF
3S 3 Button Alert Selector	48" AFF
2A 2 Button Manual Alert	48" AFF
County Emergency Phone	Per County
Reset Button	48" AFF
Stove Reset	48" AFF
Stove Disconnect	Located at Solenoid
8" 70V Speaker, 2.5 Watt	Ceiling
BS Bathroom Speaker, 1.0 Watt	Ceiling
WS Wall Speaker, 2.0 Watt	78" AFF
OS Omnidirectional, 7.5 Watt	192" AFF
ES External Speaker, 7.5 Watt	Under Soffit
LED 8" LED Ceiling Speaker, 2.5 Watt	Ceiling
R B Colored LED Strobe	Ceiling
Red LED Cluster Light	Ceiling
R A B Stacklights	Ceiling/ Wall
POE PoE Switch	Rack
RIB Relay	Above Ceiling
CAD LED 43" CAD 43/55" LED Display	78" AFF*
FAST FAST Server	Rack
FHA Trouble Strobe	Ceiling
APS APS IP Controller System	Rack

Wire Color Legend

- 16/2 -
- 16/4 -
- 18/2 OAS -
- 18/6 -
- Cat6 -
- 22/6 -

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2023

CONSULTANT:

READING FIRE DEPARTMENT, MARION STREET STATION
1201 N 9TH STREET, CITY OF READING, PA 19604

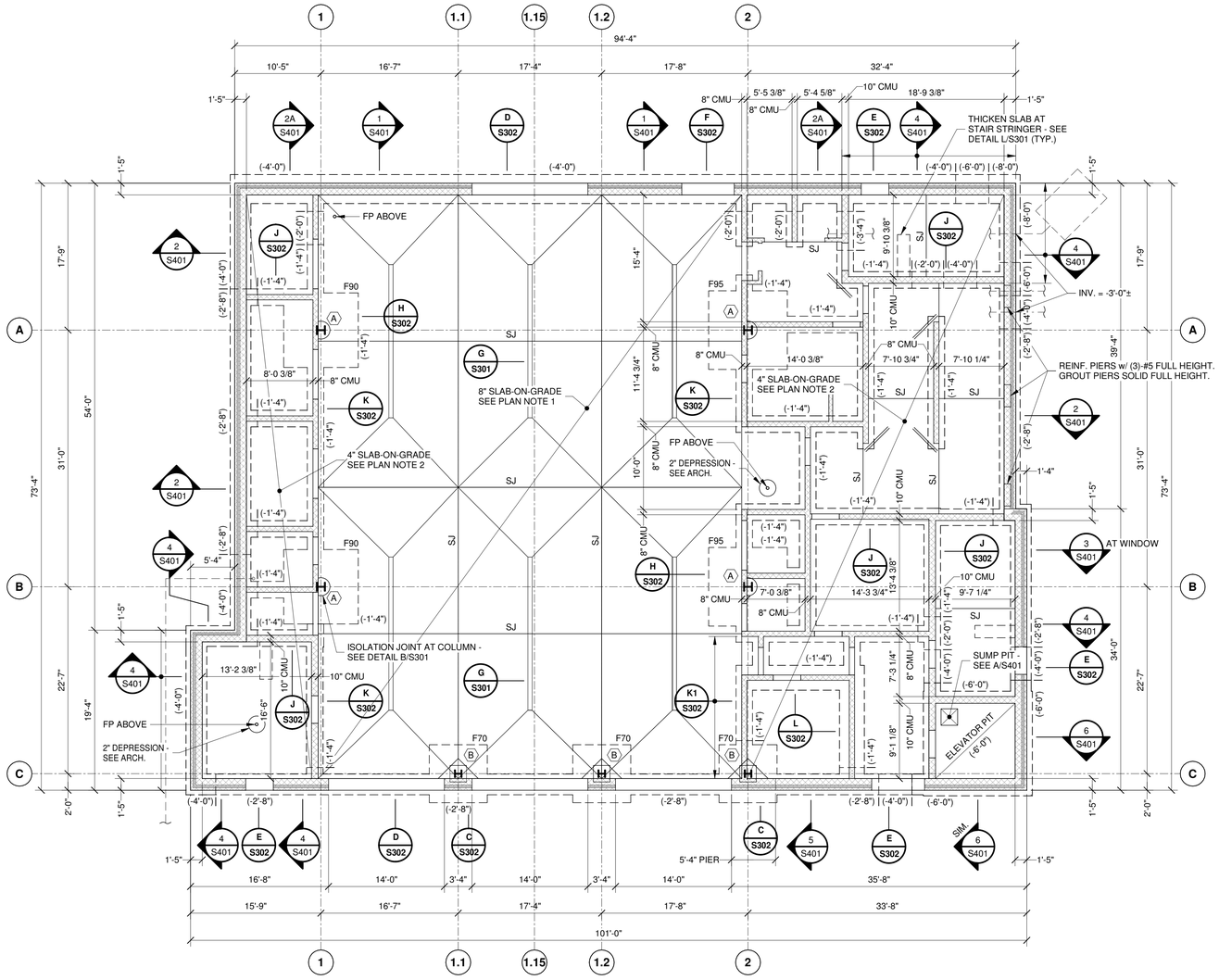
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: TYPICAL DETAILS
SHEET NUMBER: AL - 104

7/20/2021 11:45:54 AM

ABBREVIATIONS

&	AND
@	AT
Ø	DIAMETER
±	PLUS OR MINUS
AES	ARCHITECTURALLY EXPOSED STEEL
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
ASD	ALLOWABLE STRESS DESIGN
BM	BEAM
BOTT	BOTTOM
BP	BEARING PLATE
℄	CENTERLINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EL	ELEVATION
ELEV	ELEVATION
EQUIV	EQUIVALENT
EW	EACH WAY
EX	EXISTING
EXIST	EXISTING
EXT	EXTERIOR
FD'N	FOUNDATION
FP	FIRE POLE
FT'G	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL
HK	HOOK
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
L	ANGLE
LBS	POUNDS
LT GA	LIGHTGAUGE
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
NA	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
PC	PRECAST CONCRETE
PERP	PERPENDICULAR
PL	PLATE
PREFAB	PREFABRICATED
PROJ	PROJECTION
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED
REINF	REINFORCED, REINFORCEMENT
REQ'D	REQUIRED
REV	REVISION
RTU	ROOFTOP UNIT
SAN	SANITARY
SD	STORM DRAIN
SIM	SIMILAR
SJ	SLAB JOINT
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
T&B	TOP AND BOTTOM
TB	TRUSS BEARING
THRU	THROUGH
TOB	TOP OF BEAM
TOJ	TOP OF JOIST
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
w/	WITH
WWM	WELDED WIRE MESH



COLUMN SCHEDULE

	A	B	C
ROOF			W8x31
SECOND FLOOR	W12x65	W10x49	
FLOOR			
BOTTOM OF BASE PLATE ELEVATION	-1'-3"	-0'-11"	+21'-1"
BASE PLATE	14"x1"x1'-2"	12"x1"x1'-4"	9"x1/2"x9"
BASE PLATE CONFIGURATION			
ANCHOR BOLTS	(4)-3/4"∅ x 1'-4" + 3" HOOK w/ 4 1/2" THREADED PROJECTION	(4)-3/4"∅ x 1'-4" + 3" HOOK w/ 4 1/2" THREADED PROJECTION	(4)-3/4"∅ H.S. BOLTS
CONCRETE PIER SIZE & REINFORCING (IF REQUIRED)	20"x20" (4)-#9 VERT. & #3 TIES @ 8"o.c.	20"x20" (4)-#9 VERT. & #3 TIES @ 8"o.c.	
PIER DETAIL			

COLUMN FOOTING SCHEDULE

MARK	SIZE	BOTTOM REINFORCING
F70	7'-0"x7'-0"x1'-6"	(7)-#8 x 6'-6" EACH WAY, BOTTOM
F90	9'-0"x9'-0"x2'-0"	(9)-#9 x 8'-6" EACH WAY, BOTTOM
F95	9'-6"x9'-6"x2'-0"	(10)-#9 x 9'-0" EACH WAY, BOTTOM

PROJECT NORTH

FOUNDATION/ FIRST FLOOR PLAN

1/8" = 1'-0"

1. UNLESS OTHERWISE NOTED, SLAB-ON-GRADE TO BE 8" MINIMUM, THICK CONCRETE SLAB w/ #3 @ 12"o.c. EACH WAY, ON SEAMLESS POLYETHYLENE VAPOR BARRIER OVER 1" HIGH DENSITY, 60psi MINIMUM COMPRESSIVE STRENGTH OWENS CORNING FOAMULAR 600XPS INSULATION, OVER 6" THICK CRUSHED STONE OR WASHED GRAVEL OVER A PROPERLY PREPARED SUBGRADE.
2. UNLESS OTHERWISE NOTED, SLAB-ON-GRADE TO BE 4" MINIMUM THICK CONCRETE SLAB w/ 6x6x10/10 WWM ON SEAMLESS POLYETHYLENE VAPOR BARRIER OVER 6" THICK CRUSHED STONE OR WASHED GRAVEL OVER A PROPERLY PREPARED SUBGRADE. WHERE APPLICABLE, PROVIDE 1" HIGH DENSITY, 60psi MINIMUM COMPRESSIVE STRENGTH OWENS CORNING FOAMULAR 600XPS INSULATION BENEATH THE VAPOR BARRIER. SEE ARCHITECTURAL DRAWINGS FOR EXTENT.
3. TOP OF SLAB-ON-GRADE ELEVATION EQUALS DATUM ELEVATION 0'-0" UNLESS OTHERWISE NOTED ±X" AS REFERENCED FROM DATUM ELEVATION 0'-0".
4. TOP OF FOOTING ELEVATIONS ARE NOTED THUS (-X'-X") IN PLAN AS REFERENCED FROM DATUM ELEVATION 0'-0".
5. REFER TO DRAWING 201 FOR GENERAL NOTES.
6. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT OF INTERIOR CMU WALLS, SLOPED SLABS, FLOOR DRAINS, SLAB DEPRESSIONS, ETC.
7. SJ = SLAB JOINT - SEE DETAIL A/S301.

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MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

NO.	DESCRIPTION	DATE

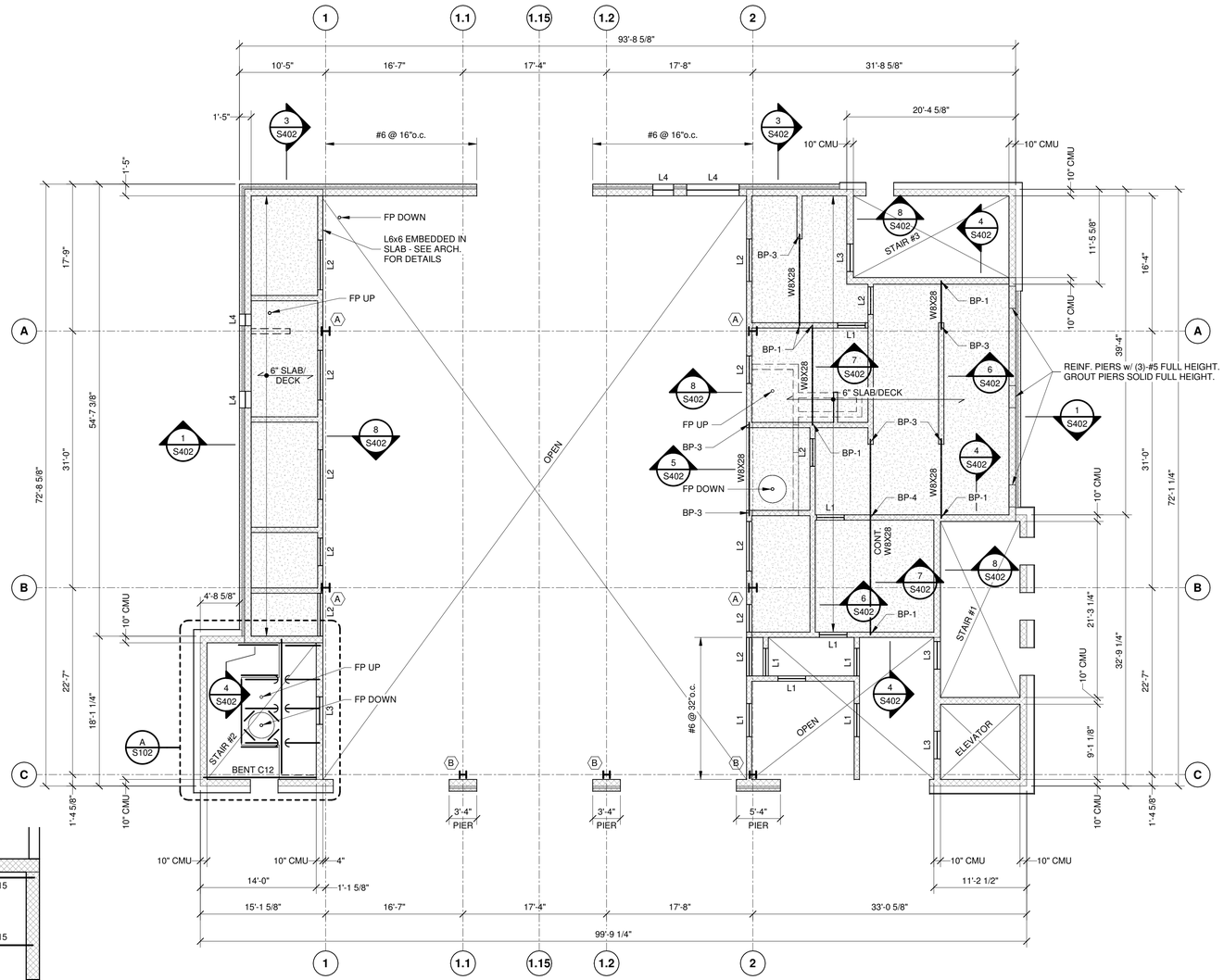
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

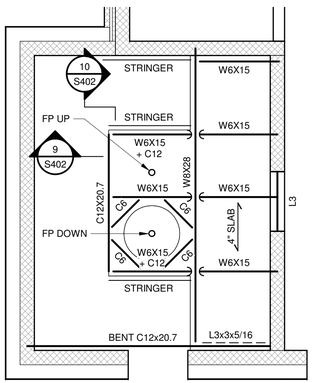
DRAWING TITLE: FOUNDATION/ FIRST FLOOR PLAN

SHEET NUMBER: **S101**

7/20/2021 2:23:29 PM

MPM #21015





PLAN DETAIL (A / S102)

1/4" = 1'-0"

1. MEZZANINE SLAB AT STAIR #2 TO BE 4" TOTAL THICK CONCRETE SLAB w/ 1 1/2", 20ga., GALV. COMPOSITE METAL DECK TYPE 1.5VL (50ksi) AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT.
2. ALL BEARING PLATES TO BE BP-1, UNLESS OTHERWISE NOTED.
3. TOP OF SLAB = +10'-8".
4. STAIRS TO BE BY STAIR DESIGNER.
5. C6 = C6x8.2
6. ⟵ INDICATES COMPLETE PENETRATION WELDED MOMENT CONNECTION - SEE DETAILS.

PROJECT NORTH

MEZZANINE FRAMING PLAN

1/8" = 1'-0"

1. UNLESS OTHERWISE NOTED, ENTIRE MEZZANINE AREAS TO BE 6" TOTAL THICK CONCRETE SLAB w/ 3", 16ga., GALVANIZED COMPOSITE METAL DECK TYPE "3VL1" AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. REINFORCE SLAB w/ 6x6x8/8 WWM TOP & #4 @ 12"o.c. BOTTOM PARALLEL WITH DECK SPAN. MINIMUM DECK PROPERTIES $I_P = I_N = 0.919$, $S_P = 0.534$, $S_N = 0.551$. FASTEN DECK w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS AT 12"o.c. FASTEN SIDE LAPS w/ #10 TEK SCREWS @ 24"o.c.
2. PROVIDE TEMPORARY SHORING FOR DECK PRIOR TO PLACING CONCRETE WHERE INDICATED AND AS REQUIRED BY MANUFACTURERS RECOMMENDATIONS, NAMELY AT SINGLE SPANS GREATER THAN 9'-8", DOUBLE SPANS GREATER THAN 11'-0", & TRIPLE SPANS GREATER THAN 12'-3".
3. ⟷ IN PLAN INDICATES THE DIRECTION OF SLAB SPAN.
4. TOP OF MEZZANINE SLAB ELEVATION EQUALS +10'-8" AS REFERENCED FROM DATUM ELEVATION 0'-0".
5. TOP OF STEEL ELEVATION EQUALS +10'-2".
6. PROVIDE LEVEL FLOOR SLAB. ASSUME 1" MIN. ADDITIONAL CONCRETE TO ACCOUNT FOR CONSTRUCTION LOAD DEFLECTIONS.
7. SEE DRAWING S201 FOR GENERAL NOTES.
8. = = = IN PLAN INDICATES CMU WALL ABOVE.
9. ⟵ INDICATES COMPLETE PENETRATION WELDED MOMENT CONNECTION - SEE DETAILS.

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MANCINI ENGINEER 31361-E

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1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

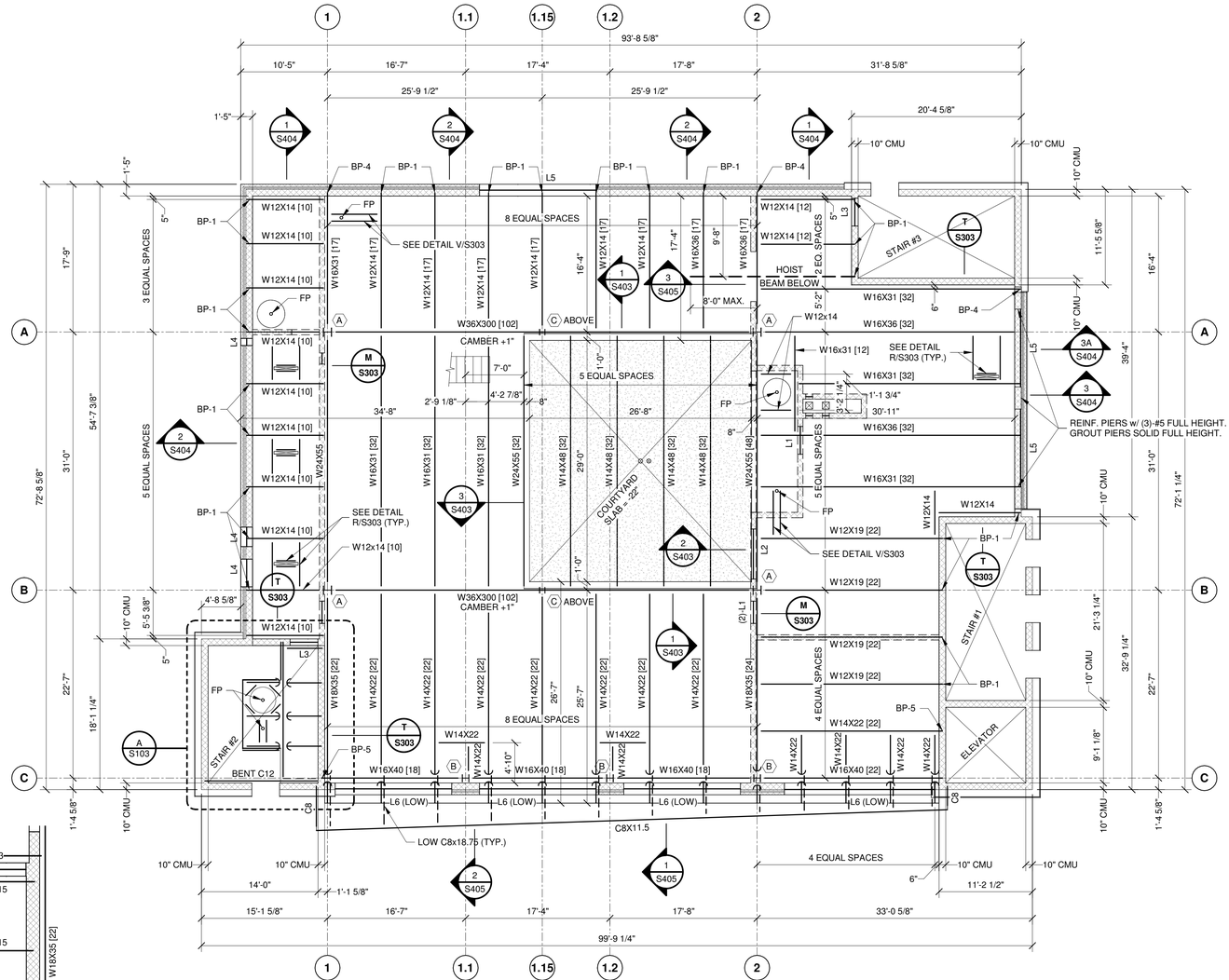
NO.	DESCRIPTION	DATE

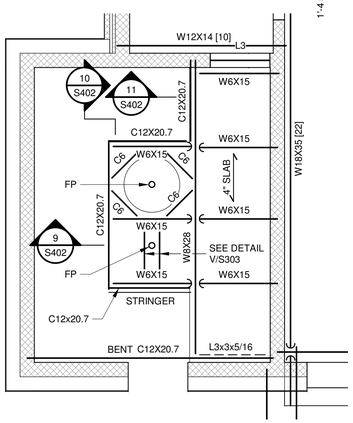
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE FRAMING PLAN
SHEET NUMBER: S102

7/20/2021 2:23:29 PM

MPM #21015





PLAN DETAIL

A / S103 — 1/4" = 1'-0"

1. SECOND FLOOR SLAB AT STAIR #2 TO BE 4" TOTAL THICK CONCRETE SLAB w/ 1 1/2", 20ga., GALV. COMPOSITE METAL DECK TYPE 1.5VL (50ksi) AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT.
2. ALL BEARING PLATES TO BE BP-1, UNLESS OTHERWISE NOTED.
3. TOP OF SLAB = +21'-6".
4. STAIRS TO BE BY STAIR DESIGNER.
5. ⟵ INDICATES COMPLETE PENETRATION WELDED MOMENT CONNECTION - SEE DETAILS.

PROJECT NORTH

SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"

1. SECOND FLOOR DECK TO BE 5" TOTAL THICK NORMAL WEIGHT (150pcf) CONCRETE SLAB w/ 1 1/2", 20ga., GALV., COMPOSITE METAL DECK TYPE 1.5VL (50ksi) AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. REINFORCE SLAB w/ 6x6x8/8 WWM. MINIMUM DECK PROPERTIES: I_P = 0.186, , I_N = 0.222, S_P = .224, S_N = .231. FASTEN DECK TO ALL SUPPORTS w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS @ 12"o.c. FASTEN SIDE LAPS w/ #10 TEK SCREWS @ 24"o.c.
2. TOP OF SLAB ELEVATION TO BE EL. +21'-6" AS MEASURED FROM DATUM EL. 0'-0", UNLESS OTHERWISE NOTED.
3. TOP OF STEEL BEAMS TO BE AT ELEV. +21'-1" UNLESS OTHERWISE NOTED THUS (±X") IN PLAN AS MEASURED FROM EL. +19-7".
4. PROVIDE LEVEL FLOOR SLAB. ASSUME 1" MIN. ADDITIONAL CONCRETE TO ACCOUNT FOR CONSTRUCTION LOAD DEFLECTIONS.
5. [00] INDICATES THE NUMBER OF 3/4"∅ x 4" HEADED SHEAR STUDS TO BE EQUALLY SPACED ON BEAM OR BETWEEN FILLER BEAMS.
6. PROVIDE MISCELLANEOUS STEEL ANGLES AS REQUIRED AT COLUMNS AND CORNERS TO PROVIDE DECK SUPPORT.
7. REFER TO DRAWING S201 FOR GENERAL NOTES.
8. ⟵ INDICATES COMPLETE PENETRATION WELDED MOMENT CONNECTION - SEE DETAILS.
9. ⟶ INDICATES SEMI-RIGID MOMENT CONNECTION - SEE DETAILS.
10. ⟂⟂ INDICATES CMU WALL BELOW.

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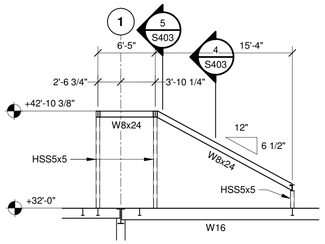
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

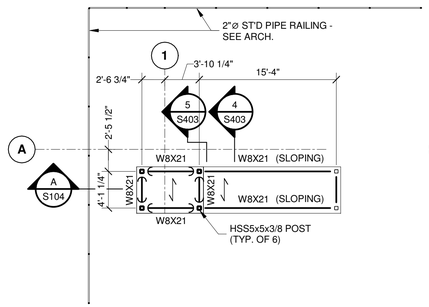
DRAWING TITLE: SECOND FLOOR FRAMING PLAN
SHEET NUMBER: S103

7/20/2021 2:23:29 PM

MPM #21015



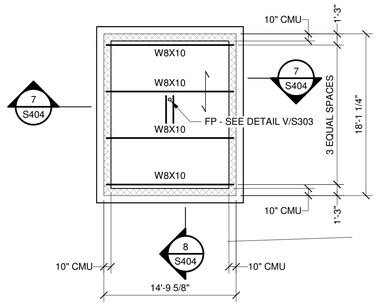
SECTION A S104 1/8" = 1'-0"



HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

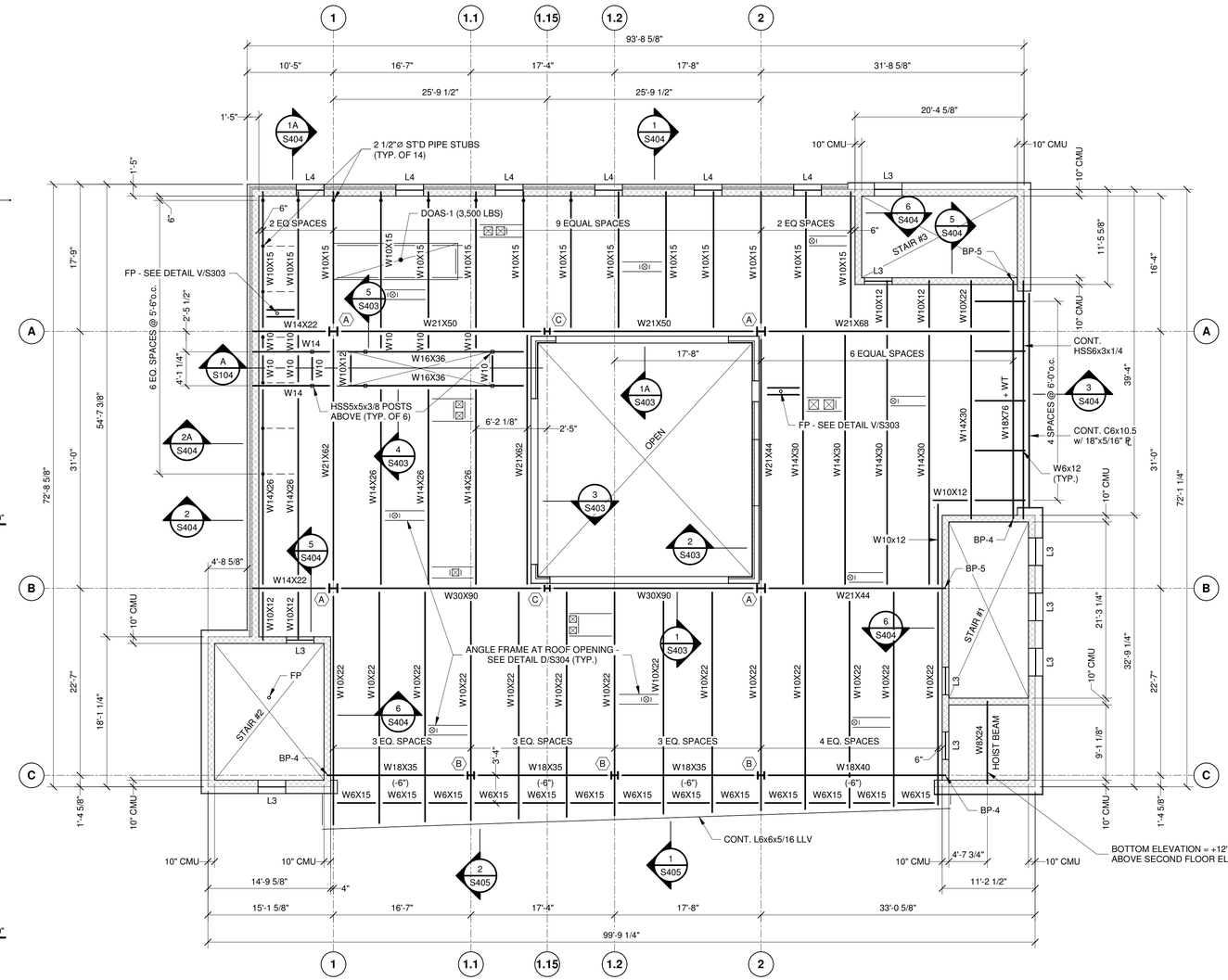
1. ELEVATION AT TOP OF STEEL = +42'-10 3/8"± AS REFERENCED TO DATUM ELEVATION 0'-0", UNLESS OTHERWISE NOTED.
2. ENTIRE ROOF DECK TO BE 1 1/2", 20ga., GALVANIZED TYPE 'B' METAL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. MINIMUM DECK PROPERTIES: I_P = 0.201 , , I_N = 0.222, S_P = .234, S_N = .247. FASTEN DECK TO ALL SUPPORTS w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS @ 12"o.c.



HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

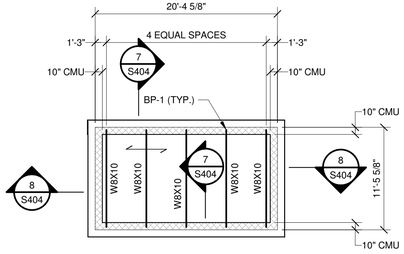
1. ELEVATION AT TOP OF STEEL = +33'-4" AS REFERENCED TO DATUM ELEVATION 0'-0", UNLESS OTHERWISE NOTED.
2. ENTIRE ROOF DECK TO BE 1 1/2", 20ga., GALVANIZED TYPE 'B' METAL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. MINIMUM DECK PROPERTIES: I_P = 0.201 , , I_N = 0.222, S_P = .234, S_N = .247. FASTEN DECK TO ALL SUPPORTS w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS @ 12"o.c.

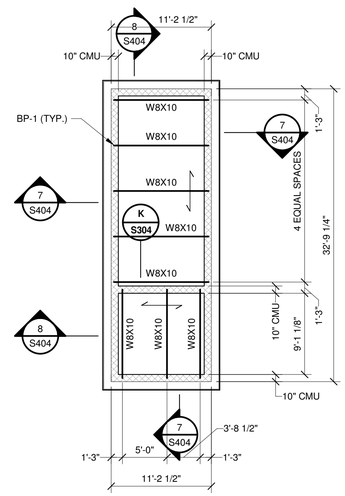


HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

1. ELEVATION AT TOP OF STEEL = +35'-4" AS REFERENCED TO DATUM ELEVATION 0'-0", UNLESS OTHERWISE NOTED.
2. ENTIRE ROOF DECK TO BE 1 1/2", 20ga., GALVANIZED TYPE 'B' METAL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. MINIMUM DECK PROPERTIES: I_P = 0.201 , , I_N = 0.222, S_P = .234, S_N = .247. FASTEN DECK TO ALL SUPPORTS w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS @ 12"o.c.





ROOF FRAMING PLAN

1/8" = 1'-0"

PROJECT NORTH

1. ENTIRE ROOF DECK TO BE 1 1/2", 20ga., GALVANIZED TYPE 'B' METAL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT. MINIMUM DECK PROPERTIES: I_P = 0.201, , I_N = 0.222, S_P = .234, S_N = .247. FASTEN DECK TO ALL SUPPORTS w/ APPROPRIATE HILTI X-HSN 24 OR X-ENP 19 FASTENERS @ 12"o.c.
2. ELEVATION AT TOP OF STEEL = +32'-0" AS REFERENCED TO DATUM ELEVATION 0'-0", UNLESS OTHERWISE NOTED.
3. TOP OF STEEL BEAM ELEVATION INDICATED THUS (-X") AS REFERENCED FROM TOP OF STEEL ELEVATION +32'-0".
4. ⟵ INDICATES COMPLETE PENETRATION WELDED MOMENT CONNECTION - SEE DETAILS.
5. ⟶ INDICATES SEMI-RIGID MOMENT CONNECTION - SEE DETAILS.
6. REFER TO DRAWING S201 FOR GENERAL NOTES.
7. PROVIDE BP-1 FOR ALL BEAMS BEARING ON MASONRY, UNLESS OTHERWISE NOTED IN PLAN.
8. BEAMS LABELED W10 = W10x12
9. BEAMS LABELED W14 = W14x30

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

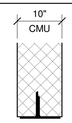
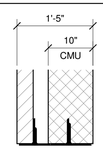
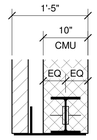
DRAWING TITLE: ROOF FRAMING PLANS

SHEET NUMBER: **S104**

7/20/2021 2:23:30 PM

MPM #21015

LINTEL SCHEDULE

MARK	TYPE	CONFIGURATION	REMARKS
P	4" WIDE x 8" HIGH PRECAST MASONRY LINTEL w/ (1)-#5 T & B FOR EACH 4" OF WALL THICKNESS.		WHERE INDICATED AND FOR OPENINGS IN NON-BEARING INTERIOR PARTITIONS UP TO 5'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MINIMUM BEARING EACH END.
P6	6" WIDE x 8" HIGH PRECAST MASONRY LINTEL w/ (1)-#5 T & B.		WHERE INDICATED AND FOR OPENINGS IN NON-BEARING INTERIOR PARTITIONS UP TO 5'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MINIMUM BEARING EACH END.
L1	L4x3 1/2x5/16 LLV FOR EACH 4" OF WALL THICKNESS.		WHERE INDICATED AND FOR OPENINGS IN 8" BEARING WALLS UP TO 6'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MIN. BEARING EACH END.
L2	L6x3 1/2x5/16 LLV FOR EACH 4" OF WALL THICKNESS.		WHERE INDICATED AND FOR OPENINGS IN 8" BEARING WALLS BETWEEN 6'-0" TO 10'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MIN. BRG. EACH END.
L3	L6x4x5/16 LLV + L5x5x5/16		WHERE INDICATED AND FOR OPENINGS IN EXTERIOR WALLS UP TO 6'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MINIMUM BEARING EACH END.
L4	L6x3 1/2x5/16 LLV AND L4x3 1/2x5/16 LLV WELDED ASSEMBLY AT VENEER PLUS L6x4x5/16 LLV & L5x5x5/16 AT BACK-UP		WHERE INDICATED AND FOR OPENINGS IN EXTERIOR WALLS UP TO 6'-0" WIDE, UNLESS OTHERWISE NOTED. PROVIDE 8" MINIMUM BEARING EACH END.
L5	W8x28 + 5/16"x16" PLATE + 6"x5/16" VERTICAL PLATE (WELDED ASSEMBLY)		FOR OPENINGS 1'-5" WALLS WHERE INDICATED. ENTIRE ASSEMBLY TO BEAR 8" EACH END.
L6	HSS16x8x3/8 + W16x40		WHERE INDICATED. PROVIDE BP-6 EACH END. SEE SECTION 1/S405 & DETAIL A/S405.

1. ALL OPENINGS IN MASONRY WALLS AND IN PARTITIONS ARE TO BE PROVIDED WITH LINTELS. LINTELS SHALL BE STRUCTURAL STEEL OR PRECAST CONCRETE AS INDICTED, UNLESS OTHERWISE NOTED. ALL LINTELS SHALL HAVE 8" MINIMUM BEARING AND SHALL BE SET IN A FULL BED OF MORTAR. SHORE LINTELS AS REQUIRED TO PREVENT ROTATION DURING CONSTRUCTION. NOTE THAT ALL WALL OPENINGS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL COORDINATE SIZE, TYPE, AND LOCATION OF ALL LINTELS REQUIRED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. ANGLE WELDED ASSEMBLIES THAT SUPPORT VENEER TO BE WELDED CONTINUOUSLY ALONG BOTTOM JOINT. WELD TO BE GROUND SMOOTH.

STRUCTURAL GENERAL NOTES

DIMENSIONS
THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THESE DRAWINGS AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR POTENTIAL CONFLICTS PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.

STABILITY
THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. CONSTRUCTION MEANS AND METHODS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR MUST DETERMINE ERECTION PROCEDURE AND SEQUENCE, WHICH WILL ENSURE THE STABILITY OF THE BUILDING, IT'S COMPONENT PARTS, AND TEMPORARY OR INCOMPLETE CONNECTIONS DURING ERECTION, INCLUDING THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING, TIEDOWNS, ETC. THAT MAY BE NECESSARY. SUCH MATERIAL AND METHODS ARE NOT SHOWN IN THE CONTRACT DRAWINGS OR SPECIFICATIONS AND ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER HAS NO EXPERTISE IN, AND TAKES NO RESPONSIBILITY FOR, THE CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. PROCESSING OR APPROVING SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED, SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OF ANY RESPONSIBILITY FOR CONSTRUCTION METHODS AND/OR SAFETY PROCEDURES. IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY PROCEDURES. IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE STRUCTURAL ENGINEER DOES NOT ENGAGE IN AND DOES NOT SUPERVISE CONSTRUCTION.

COORDINATION
THE CONTRACTOR SHALL VERIFY/COORDINATE FLOOR DEPRESSIONS, ROOF, AND WALL OPENINGS, DUCT AND PIPE OPENINGS, EQUIPMENT PADS, ETC. WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS.

FOUNDATIONS
A SUBSURFACE EXPLORATION PROGRAM AND GEOTECHNICAL ENGINEERING EVALUATION HAS BEEN PERFORMED BY ECS MID-ATLANTIC, LLC TO ASSIST THE DESIGN TEAM IN THE PREPARATION OF THESE DOCUMENTS. THEIR REPORT, DATED MARCH 18, 2021, IS AVAILABLE TO CONTRACTORS FOR INFORMATIONAL PURPOSES ONLY AND DOES NOT RELIEVE THE CONTRACTORS OF THEIR RESPONSIBILITIES TO CONDUCT THEIR OWN INDIVIDUAL TAILORED STUDY TO ASSESS SUBSURFACE CONDITIONS.
BASED UPON THE GEOTECHNICAL ENGINEERING REPORT, THE NEW STRUCTURE MAY BE SUPPORTED ON SPREAD FOOTINGS FOUNDED UPON APPROVED FIRM NATURAL SOILS OF STRATUM II OR CONTROLLED STRUCTURAL FILL. AN ALLOWABLE BEARING PRESSURE OF 2,500psf HAS BEEN USED FOR FOUNDATION DESIGN. IF SOILS OF THIS CAPACITY ARE NOT ENCOUNTERED AT ELEVATIONS INDICATED, FOOTINGS SHALL BE LOWERED OR INCREASED IN SIZE AT THE DIRECTION OF THE GEOTECHNICAL INSPECTION AGENCY AND ARCHITECT/ ENGINEER.

SITE PREPARATION:
REMOVE TOP SOIL, ALL UNSUITABLE EXISTING FILL, SOFT/LOOSE SOILS CONTAINING ORGANICS, AND ANY OTHER DELETERIOUS MATERIAL FROM THE BUILDING AREA AND 10'-0" BEYOND. REMOVE ALL EXISTING STRUCTURES OR REMNANTS OF EXISTING STRUCTURES WITHIN THE BUILDING AREA AND 10'-0" BEYOND. REMOVAL SHOULD INCLUDE ALL CONCRETE DEBRIS, UNDERGROUND PIPES AND LINES, ETC. THAT MIGHT INTERFERE WITH NEW CONSTRUCTION.
AFTER INITIAL STRIPPING OPERATION, THE SITE SHOULD BE PROOFROLLED. THE PROOFROLLING OPERATIONS SHOULD BE PERFORMED USING A 10-TON LOADED DUMP TRUCK OR ANOTHER PNEUMATIC-TIRE VEHICLE OF SIMILAR SIZE AND WEIGHT. ANY POCKETS OF SOFT OR LOOSE SOILS SHOULD BE UNDERCUT.

CONTROLLED STRUCTURAL FILL:
UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL INSPECTION AGENCY, STRUCTURAL FILL SHOULD CONSIST OF SOILS HAVING A CLASSIFICATION OF SM, SP, SW, GP, GW, GC, OR GM OR MORE GRANULAR BASED ON A UNIFIED SOIL CLASSIFICATION WITH A MAXIMUM OF 35% FINES PASSING THE No. 200 SIEVE AND PLASTICITY INDEX LESS THAN 10. CONTROLLED STRUCTURAL FILL SHOULD BE FREE OF BOULDERS, ORGANIC MATTER, DEBRIS, OR OTHER DELETERIOUS MATERIALS AND SHOULD HAVE A MAXIMUM PARTICLE SIZE NO GREATER THAN 3 INCHES. FILL MATERIALS SHOULD HAVE A MINIMUM DRY DENSITY OF 110 POUNDS PER CUBIC FEET.

FILL MATERIAL SHOULD BE PLACED IN HORIZONTAL LIFTS WITH MAXIMUM HEIGHT OF 8 INCHES LOOSE MEASURE. NEW FILL SHOULD BE ADEQUATELY KEYED INTO STRIPPED AND SCARIFIED SUBGRADE SOILS. DURING FILL OPERATIONS, POSITIVE SURFACE DRAINAGE SHOULD BE MAINTAINED TO PREVENT THE ACCUMULATION OF WATER. STRUCTURAL FILL SHOULD BE COMPACTED 95% OF THE MAXIMUM DRY DENSITY DETERMINED BY STANDARD PROCTOR (ASTM D 698).

THE WATER CONTENT OF FILL SOILS SHOULD BE MAINTAINED WITHIN THREE PERCENTAGE POINTS OF THE OPTIMUM WATER CONTENT AS DETERMINED FROM THE STANDARD PROCTOR (ASTM D 698) DENSITY TEST. EXCESSIVELY WET OR EXCESSIVELY DRY SOILS SHOULD NOT BE USED AS FILL MATERIAL WITHOUT PROPER DRYING OR WETTING.

WHERE CONSTRUCTION TRAFFIC OR WEATHER HAS DISTURBED THE SUBGRADE, THE UPPER 8 INCHES OF SOIL INTENDED FOR STRUCTURAL SUPPORT SHOULD BE SCARIFIED AND RE-COMPACTED. EACH LIFT OF FILL SHOULD BE TESTED IN ORDER TO CONFIRM THAT THE RECOMMENDED DEGREE OF COMPACTION IS ATTAINED.

FOUNDATION CONSTRUCTION:
ALL FOOTING SUBGRADES SHOULD BE OBSERVED, EVALUATED, AND VERIFIED FOR THE DESIGN BEARING PRESSURE BY THE GEOTECHNICAL ENGINEER AFTER EXCAVATION AND PRIOR TO REINFORCEMENT STEEL AND CONCRETE PLACEMENT. IF LOW BEARING SOIL IS ENCOUNTERED DURING FOUNDATION CONSTRUCTION, LOCALIZED UNDERCUTTING AND/OR IN-PLACE STABILIZATION OF FOOTING SUBGRADES WILL BE REQUIRED. THE ACTUAL NEED FOR, AND EXTENT OF, UNDERCUTTING SHOULD BE BASED ON FIELD OBSERVATIONS MADE BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.

EXCAVATIONS FOR FOOTINGS SHOULD BE MADE IN SUCH A WAY SO AS TO PROVIDE BEARING SURFACES THAT ARE FIRM, LEVEL, AND FREE OF LOOSE, SOFT, WET, OR OTHERWISE UNSUITABLE SOILS. FOUNDATION CONCRETE SHOULD NOT BE PLACED ON FROZEN OR SATURATED SUBGRADES. FOUNDATION EXCAVATIONS SHOULD BE CONCRETED AS SOON AS PRACTICAL AFTER THEY ARE EXCAVATED. IF AN EXCAVATION IS LEFT OPEN FOR AN EXTENDED PERIOD, A THIN MAT OF LEAN CONCRETE SHOULD BE PLACED OVER THE BOTTOM TO MINIMIZE DAMAGE TO THE BEARING SURFACE FROM WEATHER OR CONSTRUCTION ACTIVITIES. WATER SHOULD NOT BE ALLOWED TO POND IN ANY EXCAVATION.

CAST IN PLACE CONCRETE AND REINFORCING
ALL NEW CONCRETE SHALL CONFORM TO ACI 301, ACI 318, ACI 315. ALL NEW CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH (f'c):
SLAB-ON-GRADE: 4,000psi
SLAB-ON-METAL DECK: 4,000psi
EXTERIOR EXPOSED CONCRETE SUBJECT TO DE-ICERS: 4,500psi
ALL OTHER CONCRETE: 3,000psi
GROUT FOR MASONRY FILL: 3,000psi PEA GRAVEL CONCRETE OR GROUT PER ASTM C476
CEMENTITIOUS MATERIAL SHALL BE MINIMUM 75% PORTLAND CEMENT ASTM C150, TYPE I OR TYPE II.
REINFORCING - ASTM A 615, GRADE 60.
WELDED WIRE FABRIC - ASTM A 185.
SPLICE LAPS FOR ALL REINFORCING SHALL BE CLASS "B" SPLICE.
ALL CONCRETE OTHER THAN FOOTINGS SHALL CONTAIN A WATER-REDUCING ADMIXTURE PER MANUFACTURER'S RECOMMENDATIONS.
ALL EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED 4-6%.
MAXIMUM SLUMP TO BE 4".

MASONRY
MASONRY WORK SHALL COMPLY WITH ACI530.1/ASCE 6 "SPECIFICATIONS FOR MASONRY STRUCTURES." CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90.
CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1,900psi AND A MINIMUM PRISM STRENGTH (F'm) OF 1,500psi.
BRICK UNITS SHALL CONFORM TO ASTM C216.
MORTAR SHALL CONFORM TO ASTM C 270, TYPE S FOR ALL CMU WALLS AND TYPE N FOR ALL VENEERS.
GROUT FOR ALL MASONRY WALLS TO EITHER BE 3,000psi PEA GRAVEL CONCRETE OR COMPLY WITH ASTM C476 - GROUT.
ALL MASONRY WALLS SHALL BE CONTINUALLY REINFORCED WITH LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" CENTER TO CENTER VERTICALLY MINIMUM AND ALL INTERSECTIONS OF WALLS AND CORNERS SHALL BE PROVIDED WITH PREFABRICATED "T" AND CORNER PIECES.
VERTICAL MASONRY REINFORCEMENT SHALL BE AS NOTED ON SECTIONS.
REINFORCED WALLS SHALL HAVE CELLS FILLED SOLID WITH GROUT IN FOUR COURSE MAXIMUM LIFTS. PROVIDE HOLES IN BOTTOM OF EACH LIFT TO ENSURE WALL IS FILLED SOLID. SPLICE LAPS FOR VERTICAL WALL REINFORCING SHALL BE 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED.
PROVIDE CONTROL JOINTS IN ALL ABOVE GRADE MASONRY WALLS AT 30' ON CENTER, MAXIMUM, UNLESS OTHERWISE NOTED.
PROVIDE APPROPRIATE MASONRY ANCHORS @ 16"o.c. BETWEEN MASONRY AND ADJACENT STEEL MEMBERS.

STRUCTURAL STEEL
FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS AND AWS D1.1
ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
W-SHAPES: ASTM A992, GRADE 50.
MISC. SHAPES: ASTM A36
TUBE STEEL: ASTM A500, GRADE B.
PIPES: ASTM A53, GRADE B.
WELDING ELECTRODES: E70XX
HIGH STRENGTH BOLTS: ASTM A 325.
ANCHOR BOLTS: ASTM F1554, GRADE 36ksi
SHOP PREP STEEL PER SSPC SP3. PROVIDE TWO COATS OF THE FABRICATORS STANDARD RUST INHIBITING PRIMER TO NEW STEEL MEMBERS NOT EXPOSED TO THE WEATHER, UNLESS OTHERWISE NOTED.
NEW STEEL COMPONENTS EXPOSED TO THE WEATHER AND WHERE INDICATED SHALL BE GALVANIZED PER ASTM A123. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER ASTM A153.
PROVIDE APPROPRIATE MASONRY ANCHORS @ 16"o.c. BETWEEN MASONRY AND ADJACENT STEEL MEMBERS.

METAL DECK
FABRICATION AND ERECTION OF STEEL DECK SHALL CONFORM TO STEEL DECK INSTITUTE SPECIFICATIONS.
STEEL DECK - ASTM A 653 (SQ), GRADE 33
GALVANIZING - ASTM A 924, G 90 GALVANIZED COATING.
PLACE DECK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
ATTACH DECK WITH 5/8" PUDDLE WELDS OR HILTI X-ENP-19 ANCHORS AT ALL SUPPORTS. PLACE @ 6"o.c. (36/7 PATTERN) ALONG PERIMETER AND AT 1'-0"o.c. (36/4 PATTERN) ELSEWHERE.
FASTEN SIDE LAPS WITH #10 SCREWS AT 1'-0".
NO LOADS SHALL BE SUSPENDED FROM METAL DECK.
PROVIDE SUPPORT FRAME AT ALL OPENINGS GREATER THAN 8" IN EITHER DIRECTION.

STEEL GRATING
NEW STEEL GRATING TO BE McNICHOLS BANDED 1" GALVANIZED STEEL GRATING WITH 1"x3/16" BEARING BARS @ 1 3/16"o.c. AND CROSS RODS @ 4"o.c.
PLACE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION.

STEEL STAIR AND RAILING SYSTEMS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, AND ERECTION OF THE STEEL STAIRS AND RAILING SYSTEMS. STAIR AND RAILING FRAMING SHALL BE DESIGNED FOR APPLICABLE CODE REQUIREMENTS. STRINGERS ARE TO BE MC12x14.3 MINIMUM, UNLESS OTHERWISE NOTED.

COLD-FORMED METAL FRAMING
THE DESIGN, FABRICATION, AND INSTALLATION OF ALL LIGHTGAUGE FRAMING AND THEIR CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE LIGHTGAUGE FRAMING COMPONENTS SHALL BE IN ACCORDANCE WITH ASTM 653. MINIMUM STUD SIZES AND GAUGES ARE INDICATED ON THE DRAWINGS. ALL LIGHTGAUGE MATERIALS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A924 WITH A MIN. G60 COATING, THE MINIMUM YIELD STRENGTH OF THE LIGHTGAUGE METAL STUD FRAMING COMPONENTS SHALL BE AS FOLLOWS:
16 GAUGE AND HEAVIER - ASTM A653 SQ, GRADE 50
18 GAUGE AND LIGHTER - ASTM A653 SQ, GRADE 33
ALL CONNECTIONS SHALL BE WELDED, SCREWED, OR POWDER FASTENED AS INDICATED ON THESE DRAWINGS. DO NOT CUT OR SPLICE LIGHTGAUGE FRAMING MEMBERS. DO NOT BEAR OR CONNECT LIGHTGAUGE MEMBERS WITHIN TWELVE INCHES OF THE PUNCHED OPENING IN THE MEMBER WEBS, UNLESS THE MEMBERS ARE REINFORCED WITH A MINIMUM 18" LONG UNPUNCHED TRACK OR STUD AT THE PUNCH OPENING. THE TRACK OR STUD REINFORCING PIECE SHALL BE THE SAME SIZE AND GAUGE AS THE PUNCHED MEMBER. FASTEN THE REINFORCING PIECE TO THE MEMBER WITH A MINIMUM OF FOUR SCREWS. THE CONTRACTOR SHALL PROVIDE LIGHTGAUGE MEMBERS AT THE SIZE AND SPACING INDICATED ON THESE DRAWINGS. LARGER SIZES AND/OR CLOSER SPACING MAY BE SUBSTITUTED PROVIDED THE SUBSTITUTIONS ARE COORDINATED WITH THE ARCHITECTURAL DRAWINGS.

ANCHORS
ALL ANCHORS INDICATED TO BE MANUFACTURED BY HILTI OR APPROVED EQUIVALENT.
INSTALLATION OF ALL ANCHORS SHALL ADHERE TO HILTI SPECIFICATIONS.
INSTALLERS OF ANCHORS SHALL BE TRAINED BY HILTI IN THE PROPER INSTALLATION METHODS PRIOR TO INSTALLATION OF ANCHORS IN THE FIELD.

SHOP DRAWINGS/ SUBMITTALS
ORIGINAL SHOP DRAWINGS & SUBMITTALS SHALL BE SUBMITTED FOR ARCHITECT/ENGINEER'S REVIEW FOR THE FOLLOWING ITEMS:
CONCRETE MIX DESIGN
CONCRETE AND MASONRY REINFORCING STEEL
SHOP DRAWINGS FOR STRUCTURAL STEEL & METAL DECK
STEEL STAIR & RAILING SHOP DRAWINGS & CALCULATIONS SIGNED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA
COLD-FORMED METAL FRAMING SHOP DRAWINGS & CALCULATIONS SIGNED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA
IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE FIRM, MINCIN PATEL MILANO, INC. WILL NOT BE RESPONSIBLE FOR THE CONTRACTORS INTERPRETATION OF THE INTENT OF THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION TO THE A/E AND SHALL MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY. THE GENERAL CONTRACTOR SHALL STATE IN WRITING ANY DEVIATION OR OMISSIONS FROM THE CONTRACT DOCUMENTS.

INSPECTION
AN INDEPENDENT INSPECTION AGENCY, PAID FOR BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT/ENGINEER, SHALL INSPECT/MONITOR/TEST THE FOLLOWING ITEMS:
EARTHWORK OPERATIONS INCLUDING PLACEMENT OF COMPACTED FILL AND VERIFICATION OF SOIL BEARING CAPACITY
CAST IN PLACE CONCRETE AND REINFORCING STEEL
STRUCTURAL STEEL & METAL DECK
STEEL STAIR/ RAILING SYSTEMS
COLD-FORMED METAL FRAMING
COPIES OF THE INSPECTORS FINAL REPORTS CERTIFYING THAT THE ITEMS INSPECTED HAVE BEEN INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER.

DESIGN CRITERIA
THIS BUILDING EXPANSION HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOAD CRITERIA FROM THE 2015 INTERNATIONAL BUILDING CODE AND ASCE 7-10:

ROOF LIVE LOAD:	65psf
SNOW LOAD:	
RISK CATEGORY	IV
GROUND SNOW P_g	35psf
IMPORTANCE FACTOR I_S	1.2
EXPOSURE FACTOR C_e	1.0
THERMAL FACTOR C_T	1.0
FLAT ROOF SNOW P_F	29.4psf
FLOOR LIVE LOADS	
SECOND FLOOR:	100psf
COURTYARD:	100psf
MEZZANINE:	125psf
FIRST FLOOR	
APPARATUS BAY:	250psf
ELSEWHERE:	125psf
STAIR LIVE LOADS:	100psf + APPLICABLE CONCENTRATED LOAD
WIND LOADS:	
RISK CATEGORY:	IV
BASIC WIND SPEED:	120mph
WIND EXPOSURE:	B
INTERNAL PRESSURE COEFFICIENT:	±0.18
HEIGHT & EXPOSURE ADJUSTMENT COEFFICIENT:	1.05
BASIC WIND DESIGN PRESSURES:	
MAIN WINDFORCE RESISTING SYSTEM	SEE SCHEDULE
COMPONENTS AND CLADDING	SEE SCHEDULE
SEISMIC:	
SEISMIC SITE CLASS	D
SEISMIC RISK CATEGORY	IV
SEISMIC IMPORTANCE FACTOR:	1.5
SEISMIC DESIGN CATEGORY	C
MAPPED SPECTRAL RESPONSE COEFFICIENTS:	
S_S = 0.196	
S_1 = 0.061	
SITE COEFFICIENTS	
F_a = 1.6	
F_v = 2.4	
DESIGN SPECTRAL RESPONSE COEFFICIENTS:	
S_{DS} = 0.208	
S_{D1} = 0.097	
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE PROCEDURE
BASIC SEISMIC FORCE RESISTING SYSTEM:	ORDINARY REINFORCED MASONRY SHEAR WALLS.
RESPONSE MODIFICATION COEFFICIENT:	R = 2
SEISMIC RESPONSE COEFFICIENT:	C_S = 0.148
DESIGN BASE SHEAR	V = 170^k

COMPONENTS AND CLADDING

	ROOF (DESIGN PRESSURES IN psf)				WALLS (DESIGN PRESSURES IN psf)			
ZONE / SF	1		2		3		4	5
10sf	11	-27.2	11	-45.7	11	-68.7	27.2 / -29.5	27.2 / -36.5
20sf	10.4	-26.5	10.4	-40.7	10.4	-56.9	26 / -28.3	26 / -34
50sf	9.5	-25.6	9.5	-34.3	9.5	-41.3	24.4 / -26.7	24.4 / -30.8
100sf	8.7	-24.9	8.7	-29.5	8.7	-29.5	23.1 / -25.4	23.1 / -28.3
500sf							20.3 / -22.6	20.3 / -22.6

1. FOR ALLOWABLE STRESS DESIGN (ASD) MULTIPLY TABULATED VALUES BY 0.6.

MAIN WINDFORCE RESISTING SYSTEM

HORIZONTAL (DESIGN PRESSURES IN psf)				VERTICAL (DESIGN PRESSURES IN psf)				OVERHANG (DESIGN PRESSURES IN psf)	
A	B	C	D	E	F	G	H	E_{OH}	G_{OH}
24	-13	16	-8	-29	-17	-20	-13	-41	-32

1. FOR ALLOWABLE STRESS DESIGN (ASD) MULTIPLY TABULATED VALUES BY 0.6.

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SEAL:

CONSULTANT:
MINCIN PATEL MILANO, INC.
Consulting Structural Engineers
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6511 Harford Road
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Telephone: (410) 254-7500

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

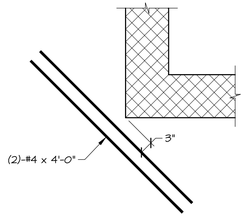
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: GENERAL NOTES & SCHEDULES
SHEET NUMBER: S201

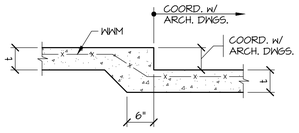
7/20/2021 2:23:31 PM

MPM #21015



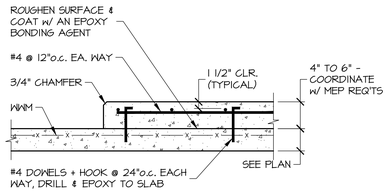
DETAIL L/5301 3/4"=1'-0"

TYPICAL CRACK CONTROL BARS AT CORNERS AND DISCONTINUOUS SLAB JOINTS.



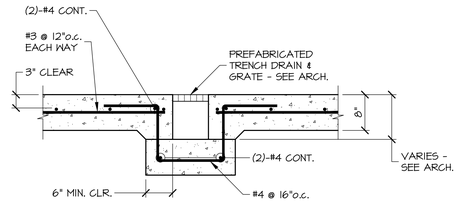
DETAIL E/5301 3/4"=1'-0"

TYPICAL SLAB-ON-GRADE DEPRESSION. COORDINATE NUMBER REQUIRED, LOCATION, SIZE, AND DEPTH w/ ARCHITECTURAL DRAWINGS.



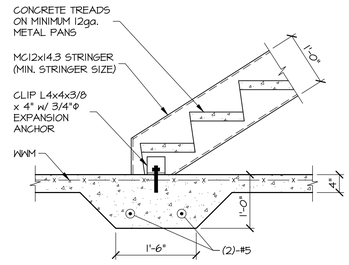
DETAIL F/5301 3/4"=1'-0"

TYPICAL INTERIOR EQUIPMENT PAD - COORDINATE NUMBER REQUIRED, SIZE, AND LOCATION w/ MEP DRAWINGS



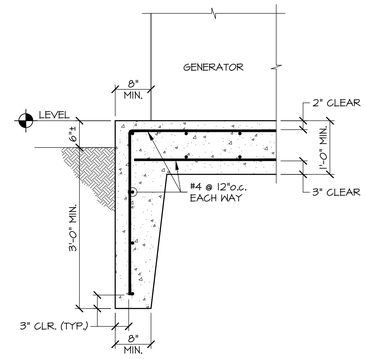
DETAIL G/5301 3/4"=1'-0"

TYPICAL PRE-FABRICATED TRENCH DRAIN. COORDINATE w/ ARCHITECTURAL DRAWINGS.



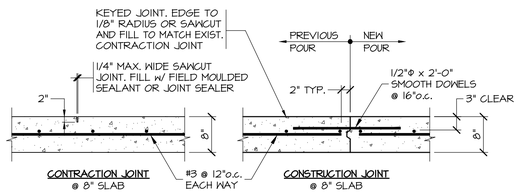
DETAIL L/5301 3/4"=1'-0"

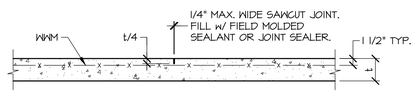
TYP. STAIR STRINGER TO SLAB ANCHORAGE. COORDINATE NUMBER REQUIRED & LOCATIONS WITH ARCHITECTURAL DRAWINGS.

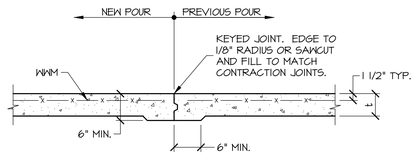


DETAIL J/5301 3/4"=1'-0"

TYPICAL EXTERIOR GENERATOR PAD. COORDINATE NUMBER REQUIRED, SIZE, AND LOCATIONS w/ ARCHITECTURAL AND MEP DRAWINGS AND EQUIPMENT TO BE SUPPLIED.



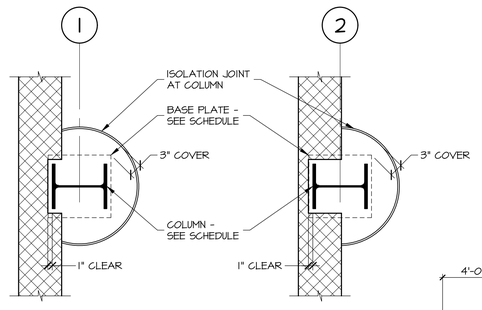


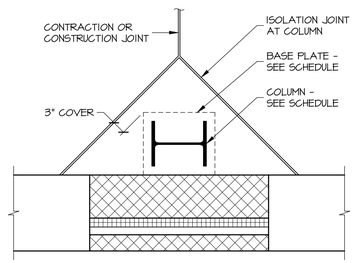


CONSTRUCTION JOINTS TO BE USED WHERE CONTRACTORS CONCRETING OPERATIONS ARE TO CONCLUDE OR BE INTERRUPTED. CONSTRUCTION JOINT LOCATIONS TO COINCIDE w/ PREDETERMINED CONTRACTION JOINT LOCATIONS AS SHOWN ON PLAN

DETAIL A/5301 3/4"=1'-0"

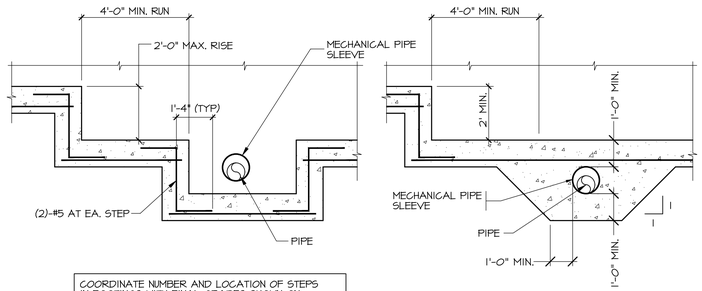
TYPICAL SLAB JOINT DETAILS





DETAIL B/5301 3/4"=1'-0"

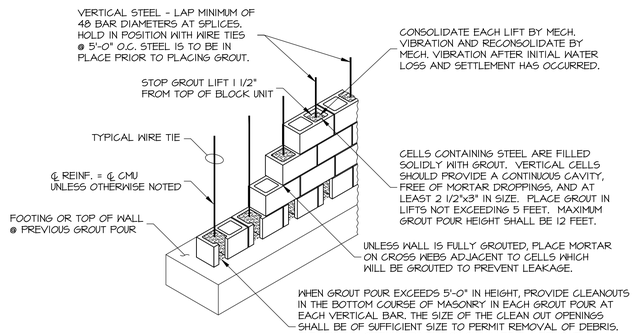
TYPICAL COLUMN ISOLATION JOINT



COORDINATE NUMBER AND LOCATION OF STEPS IN FOOTINGS WITH FINAL GRADES SHOWN ON THE CIVIL DRAWINGS AND PIPE/CONDUIT INVERT ELEVATIONS SHOWN ON THE MECHANICAL DRAWINGS

DETAIL C/5301 N.T.S.

TYPICAL STEPPED FOOTING



DETAIL D/5301 N.T.S.

TYPICAL REINFORCED MASONRY CONSTRUCTION

MW STUDIOS
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(P) 410-344-1460
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SEAL:

CONSULTANT:

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Telephone: (410) 254-7500

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

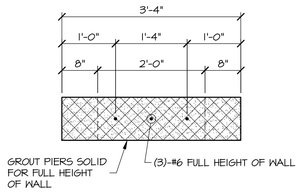
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

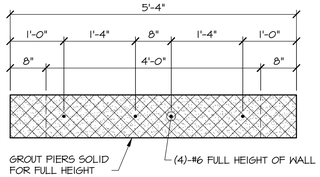
DRAWING TITLE: TYPICAL DETAILS

SHEET NUMBER: S301

MPM #21015



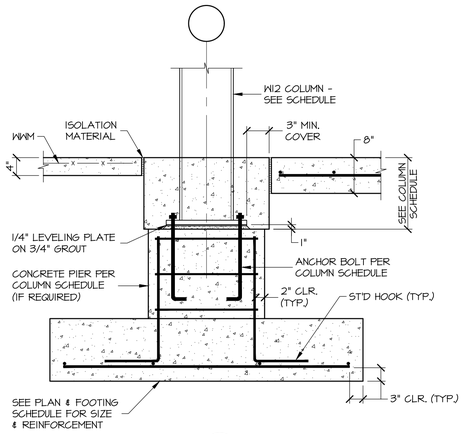
3'-4" PIER



5'-4" PIER

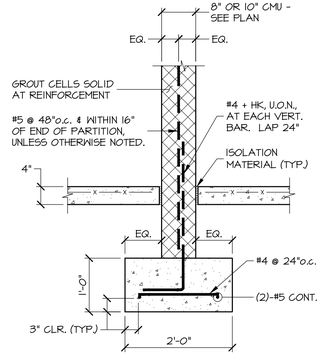
DETAIL G/S302 3/4"=1'-0"

TYPICAL PIER REINFORCING



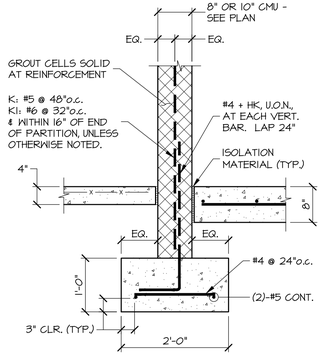
DETAIL H/S302 3/4"=1'-0"

TYPICAL INTERIOR COLUMN BASE AND FOOTING



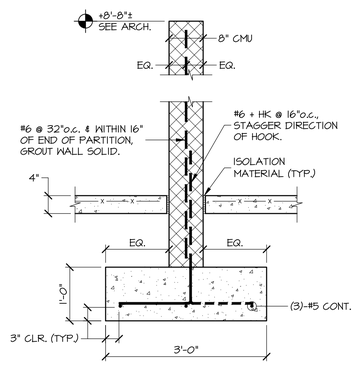
DETAIL J/S302 3/4"=1'-0"

TYP. FOUNDATION AT INTERIOR 8" OR 10" CMU WALLS AT 4" SLAB



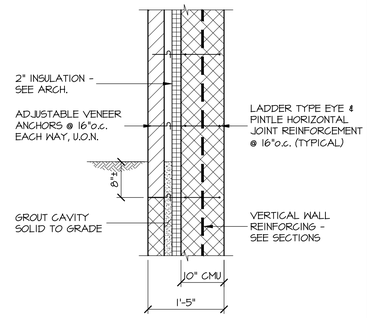
DETAIL K1/K/S302 3/4"=1'-0"

TYP.FOUNDATION AT INTERIOR 8" OR 10" CMU WALLS AT 4" & 8" SLAB



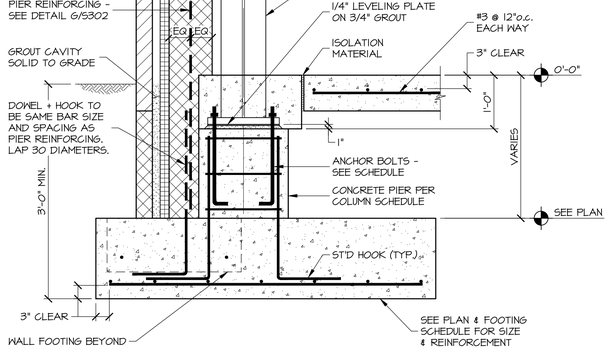
DETAIL L/S302 3/4"=1'-0"

CANTILEVERED INTERIOR WALL



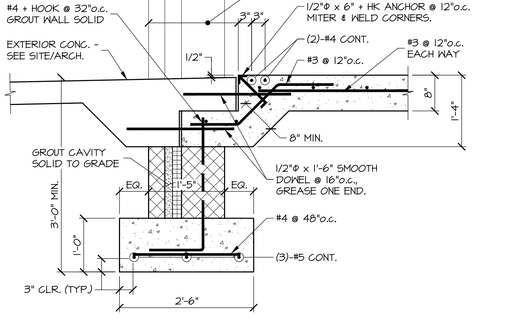
DETAIL M/S302 3/4"=1'-0"

TYPICAL BRICK VENEER ANCHORS AT CMU WALLS



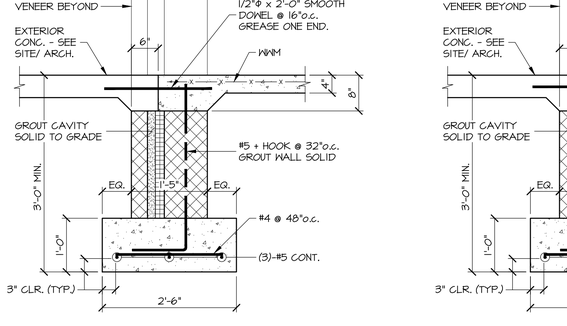
DETAIL C/S302 3/4"=1'-0"

TYPICAL W10 COLUMN BASE AND FOOTING



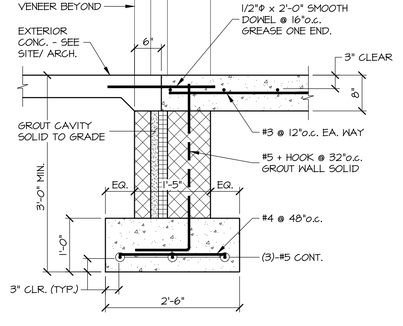
DETAIL D/S302 3/4"=1'-0"

TYPICAL FOUR-FOLD DOOR AT 8" SLAB



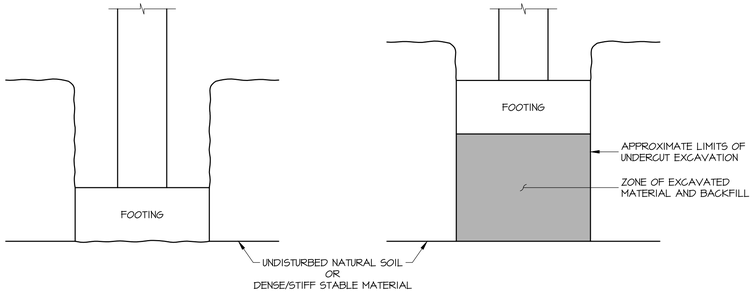
DETAIL E/S302 3/4"=1'-0"

TYPICAL MAN DOOR OR CURTAIN WALL AT 1'-5" MASONRY WALL W/ 4" SLAB



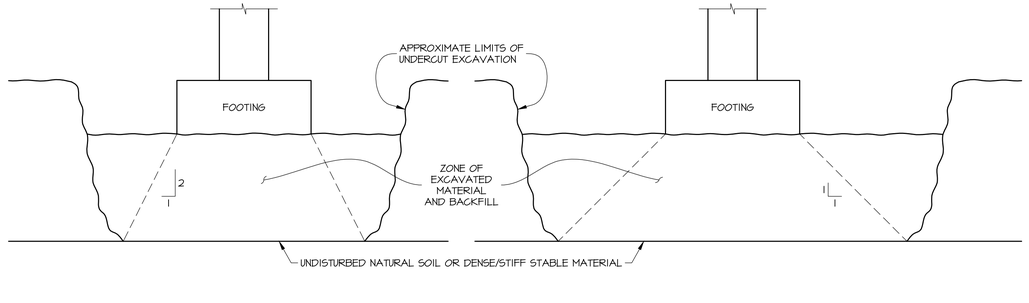
DETAIL F/S302 3/4"=1'-0"

TYPICAL MAN DOOR OR CURTAIN WALL AT 1'-5" MASONRY WALL W/ 8" SLAB



A. NO BACKFILL; FOOTING BEARING ON NEWLY EXPOSED STABLE MATERIAL

B. EXCAVATION BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL

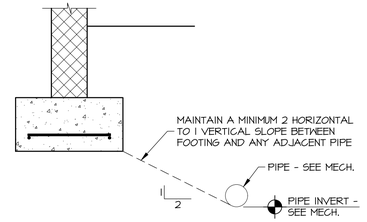


C. EXCAVATION BACKFILLED WITH GRANULAR MATER (GR-6)

D. EXCAVATION BACKFILLED WITH ENGINEERED SOIL FILL.

DETAIL A/S302 3/4"=1'-0"

TYPICAL UNDERCUT FOOTING DIAGRAMS



DETAIL B/S302 3/4"=1'-0"

TYPICAL PIPE POSITION RELATIVE TO WALL OR COLUMN FOOTING. LOWER FOOTING AS REQUIRED TO MAINTAIN 2:1 SLOPE.

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MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

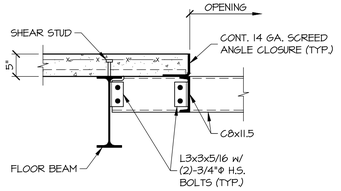
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: TYPICAL DETAILS

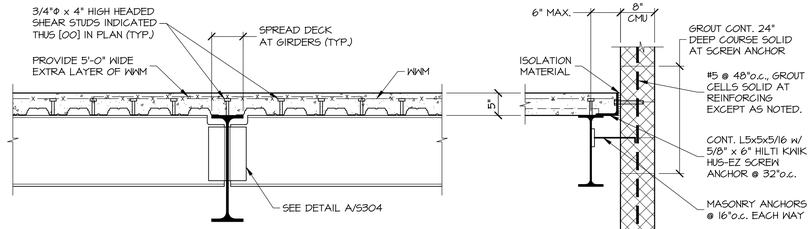
SHEET NUMBER: S302

MPM #21015



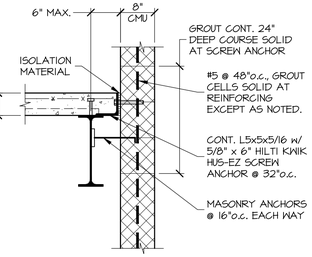
DETAIL R 5303 3/4"=1'-0"

TYPICAL CHANNEL FRAME AT ALL FLOOR OPENINGS LARGER THAN 8" IN ANY DIRECTION. COORDINATE NUMBER REQUIRED, SIZE, AND LOCATION w/ ARCH. AND MEP DRAWINGS.



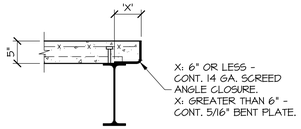
DETAIL S 5303 3/4"=1'-0"

TYPICAL SPREAD DECK AT GIRDERS



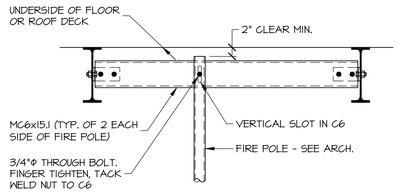
DETAIL T 5303 3/4"=1'-0"

EDGE OF SLAB AT STAIRS & ELEVATORS, U.O.N.



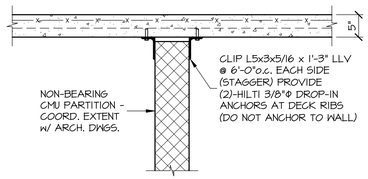
DETAIL U 5303 3/4"=1'-0"

EDGE OF SLAB AT SHAFTS, U.O.N.



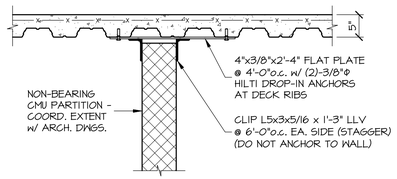
DETAIL V 5303 3/4"=1'-0"

TYPICAL BRACING AT TOP OF FIRE POLE



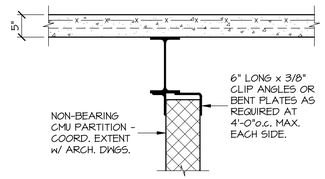
DETAIL K 5303 3/4"=1'-0"

DECK PERPENDICULAR TO INTERIOR NON-BEARING MASONRY PARTITION AT FLOOR



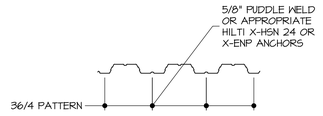
DETAIL L 5303 3/4"=1'-0"

DECK PARALLEL TO INTERIOR NON-BEARING MASONRY PARTITION AT FLOOR



DETAIL M 5303 3/4"=1'-0"

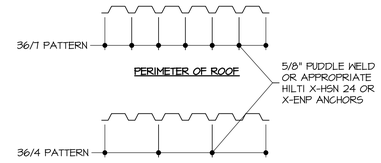
INTERIOR MASONRY NON-BEARING PARTITION PARALLEL TO BEAM AT FLOOR



1 1/2", TYPE 1.5VLI COMPOSITE FLOOR DECK

DETAIL N 5303 3/4"=1'-0"

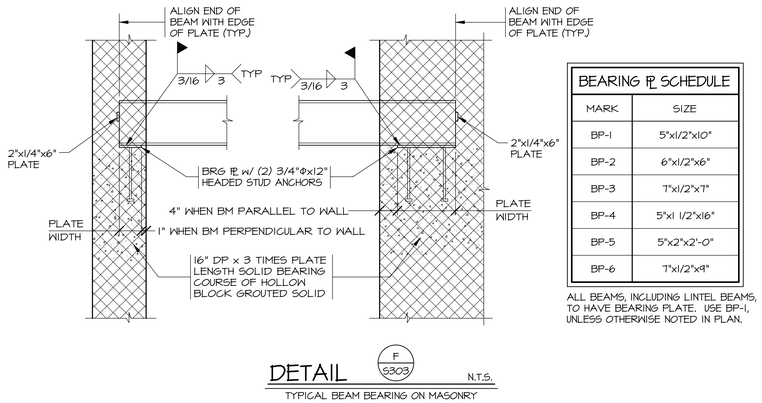
TYPICAL COMPOSITE FLOOR DECK FASTENER LAYOUT



1 1/2", TYPE 'B' ROOF DECK

DETAIL P 5303 3/4"=1'-0"

TYPICAL ROOF DECK FASTENER LAYOUT

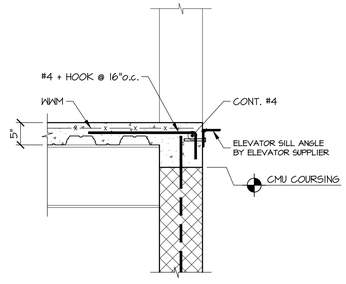


BEARING PL SCHEDULE	
MARK	SIZE
BP-1	5"x1/2"x10"
BP-2	6"x1/2"x6"
BP-3	7"x1/2"x7"
BP-4	5"x1 1/2"x16"
BP-5	5"x2"x2'-0"
BP-6	7"x1/2"x9"

ALL BEAMS, INCLUDING LINTEL BEAMS, TO HAVE BEARING PLATE. USE BP-1, UNLESS OTHERWISE NOTED IN PLAN.

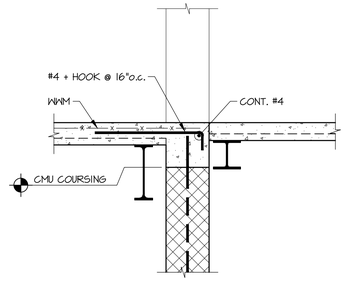
DETAIL F 5303 N.T.S.

TYPICAL BEAM BEARING ON MASONRY



DETAIL G 5303 3/4"=1'-0"

TYPICAL SLAB CONDITION AT ELEVATOR DOOR OPENING



DETAIL H 5303 3/4"=1'-0"

TYPICAL SLAB CONDITION AT STAIR DOOR OPENING

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MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PENNSYLVANIA 19604

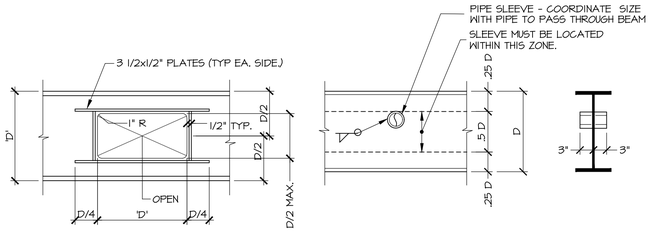
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: TYPICAL DETAILS

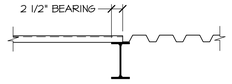
SHEET NUMBER: S303

MPM #21015



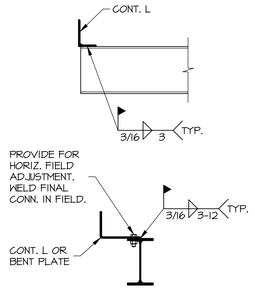
DETAIL J/S304 3/4"=1'-0"

TYPICAL SLEEVE THRU BEAM DETAIL IF REQUIRED. COORDINATE NUMBER REQUIRED, SIZE AND LOCATIONS WITH MEP DRAWINGS.



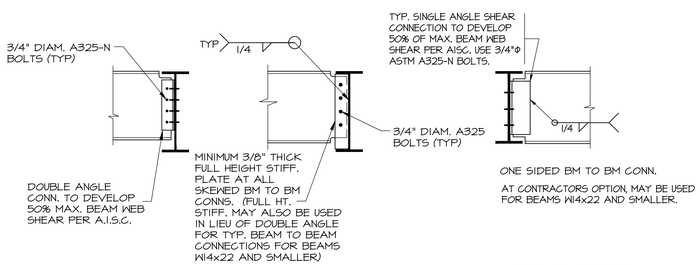
DETAIL K/S304 3/4"=1'-0"

TYPICAL CHANGE IN DIRECTION OF METAL DECK



DETAIL L/S304 3/4"=1'-0"

TYPICAL WELDED CONNECTIONS FOR MISC. ANGLES & BENT PLATES



TYP. DOUBLE ANGLE CONN.

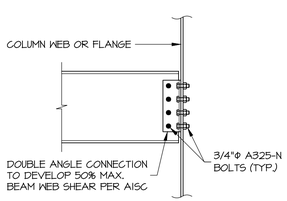
ONE SIDED OR SKEWED BM. CONN.

OPTIONAL SINGLE ANGLE CONN. FOR SMALL BMS.

DETAIL A/S304 3/4"=1'-0"

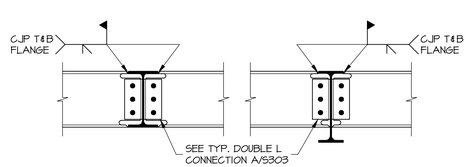
TYPICAL BEAM TO BEAM SHEAR CONNECTIONS

ALL BOLTS TO BE 3/4"ø A325-N BOLTS:	
W8, W10	2 BOLTS
W12, W14	3 BOLTS
W16	4 BOLTS
W18, W21	5 BOLTS
W24	6 BOLTS
W27	7 BOLTS
W30	8 BOLTS
W33	9 BOLTS
W36	10 BOLTS



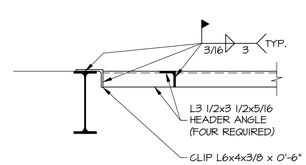
DETAIL B/S304 3/4"=1'-0"

TYPICAL BEAM TO COLUMN SHEAR CONNECTION



DETAIL C/S304 3/4"=1'-0"

TYPICAL BEAM TO BEAM MOMENT CONNECTION INDICATED THUS ⟶|⟵ IN PLAN



SECTION D/S304 3/4"=1'-0"

TYPICAL ROOF OPENING DETAIL. COORDINATE NUMBER, LOCATION, & SIZE W/ ARCH./ MEP DRAWINGS

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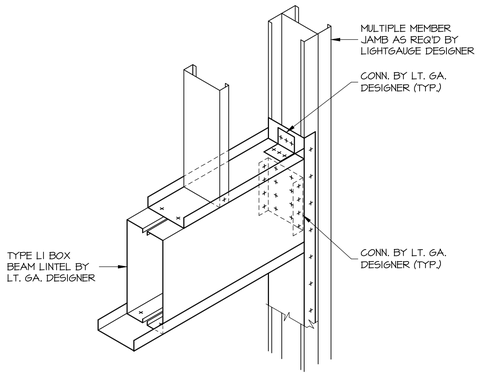
DATE ISSUED: 09/13/2021

DRAWING TITLE: TYPICAL DETAILS

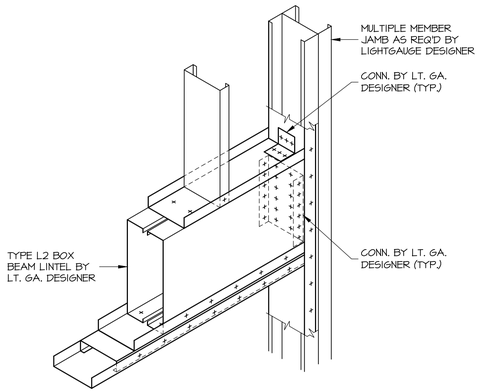
SHEET NUMBER: S304

MPM #21015



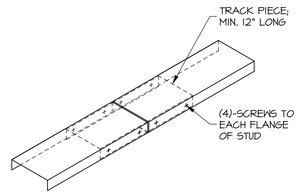
DETAIL K/5305 N.T.S.

JAMB & TYPE LL1 & LL3 LINTEL DETAILS FOR OPENING WIDTH OF 6'-0" OR LESS



DETAIL L/5305 N.T.S.

JAMB & TYPE LL2 LINTEL DETAILS FOR OPENING WIDTH GREATER THAN 6'-0"



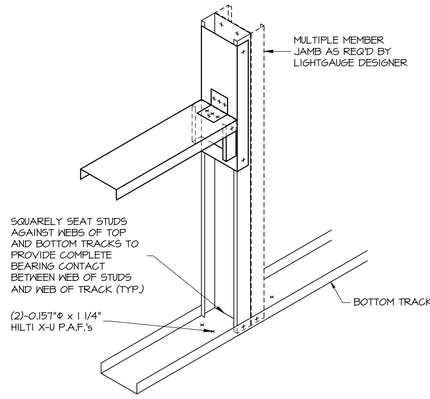
DETAIL M/5305 N.T.S.

TYPICAL TRACK SPLICE CONNECTION

STUD WALL LINTEL SCHEDULE

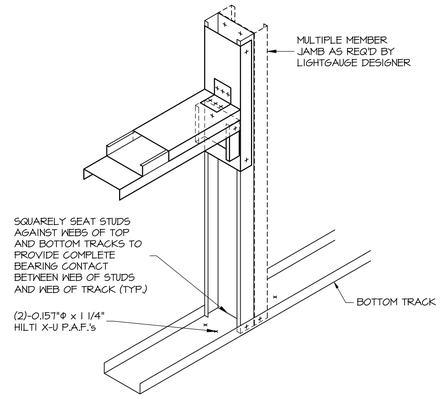
MARK	TYPE	CONFIGURATION	FULL HEIGHT JAMBS	REMARKS
LL1	BY LT. GA. DESIGNER. ASSUME (2)-600S162-54 + (2)-600T125-54	6"	ASSUME MIN. (2)-STUDS + (1)-TRACK	CONNECTIONS BY LIGHTGAUGE DESIGNER.
LL2	BY LT. GA. DESIGNER. ASSUME (2)-800S162-54 + (3)-600T125-54 + (1)-600S162-54	6"	ASSUME MIN. (2)-STUDS + (1)-TRACK	CONNECTIONS BY LIGHTGAUGE DESIGNER.
LL3	BY LT. GA. DESIGNER. ASSUME (2)-800S162-54 + (2)-800T125-54	8"	ASSUME MIN. (2)-STUDS + (1)-TRACK	CONNECTIONS BY LIGHTGAUGE DESIGNER.

NOTE:
LINTELS ARE TYPICALLY NOT SHOWN ON PLAN. USE LL3 AT ALL OPENINGS WHERE THE WALLS CONSIST OF 8" STUDS. COORDINATE ALL OTHER LINTELS WITH OPENING WIDTHS PER DETAILS K/5303 AND L/5303.



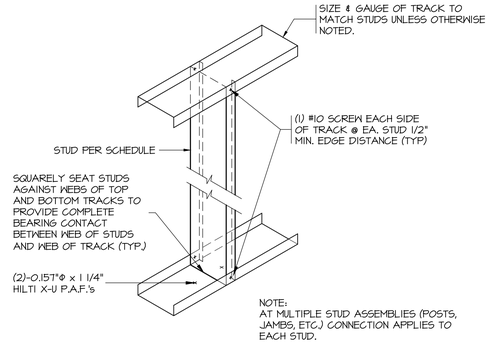
DETAIL F/5305 N.T.S.

JAMB & SILL DETAILS FOR OPENING WIDTH OF 6'-0" OR LESS



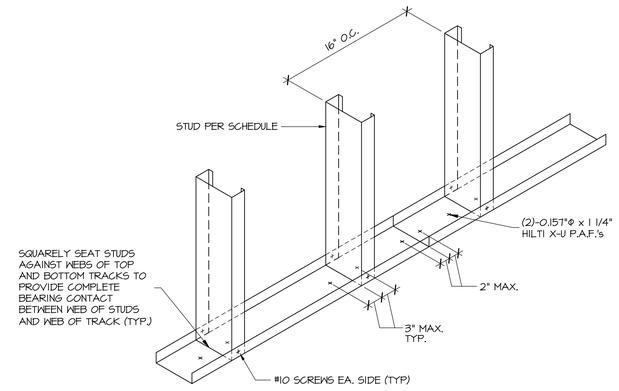
DETAIL G/5305 N.T.S.

JAMB & SILL DETAILS FOR OPENING WIDTH GREATER THAN 6'-0"



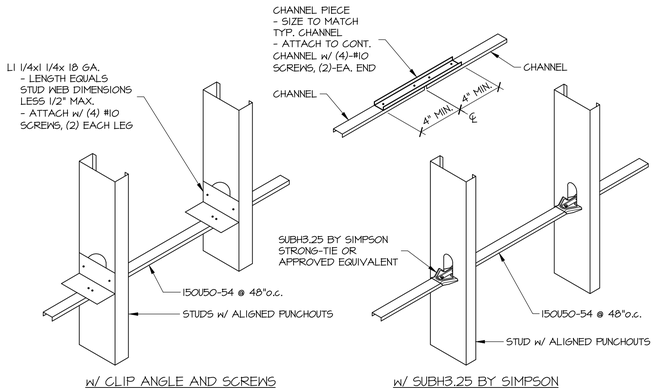
DETAIL H/5305 N.T.S.

TYPICAL TRACK TO STUD CONNECTION



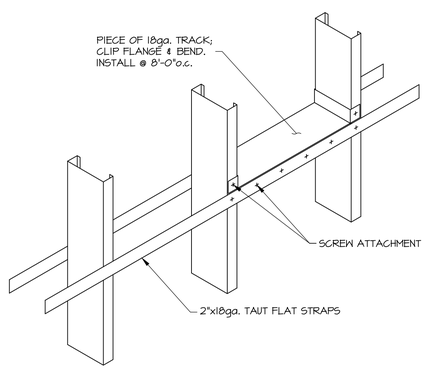
DETAIL J/5305 N.T.S.

TYPICAL TRACK CONNECTION TO CONCRETE SLAB/ GROUTED MASONRY/ STEEL BEAM/ METAL DECK



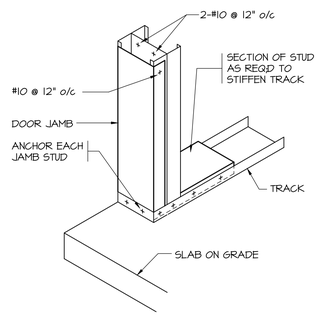
DETAIL A/5305 N.T.S.

CONTINUOUS CHANNEL BRIDGING OPTIONS AT 6" STUDS



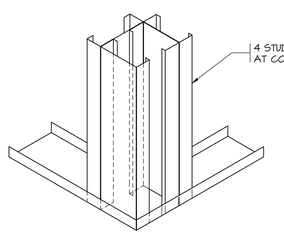
DETAIL B/5305 N.T.S.

CONTINUOUS STRAP BRIDGING AT 8" STUDS



DETAIL D/5305 N.T.S.

DOOR JAMB BASE AT SLAB-ON-GRADE



DETAIL E/5305 N.T.S.

TYPICAL CORNER

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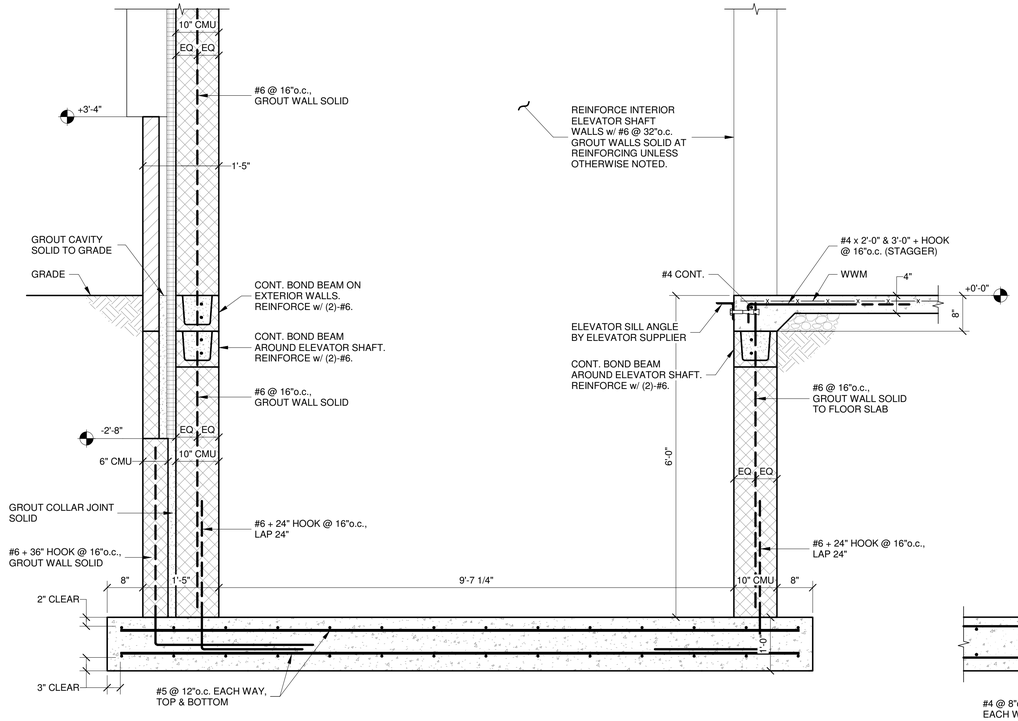
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

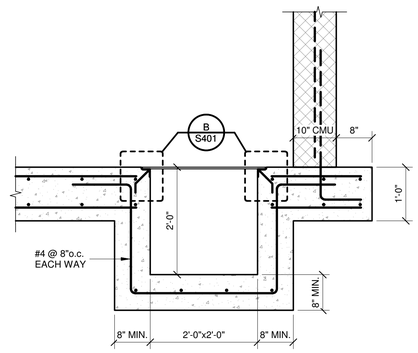
DRAWING TITLE: TYPICAL DETAILS

SHEET NUMBER: S305

MPM #21015

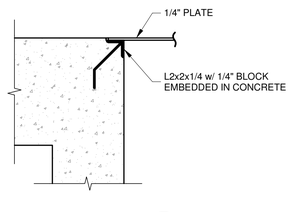


SECTION 6/S401 3/4" = 1'-0"



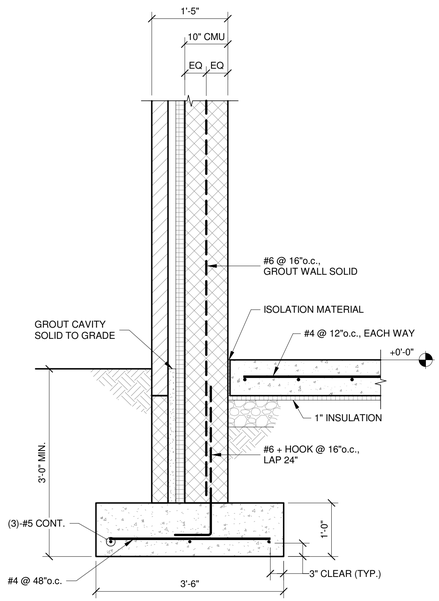
DETAIL A/S401 3/4" = 1'-0"

SUMP PIT DETAIL

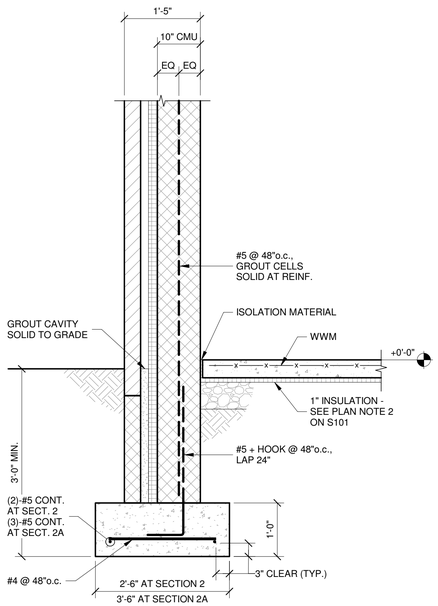


DETAIL B/S401 1 1/2" = 1'-0"

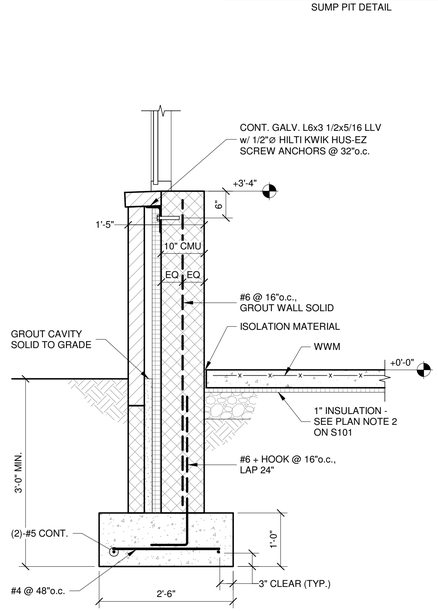
SUMP PIT - ENLARGED DETAIL



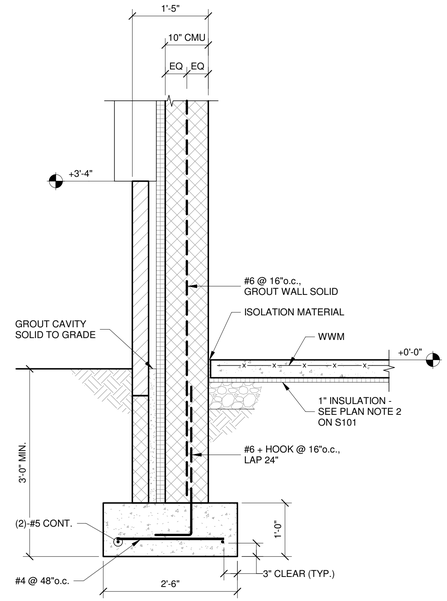
SECTION 1/S401 3/4" = 1'-0"



SECTION 2A/2/S401 3/4" = 1'-0"



SECTION 3/S401 3/4" = 1'-0"



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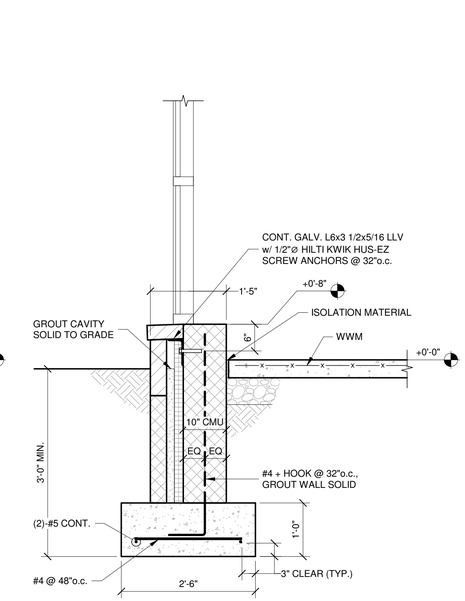

SECTION 5/S401 3/4" = 1'-0"

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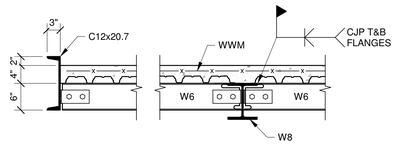
DRAWING TITLE: SECTIONS

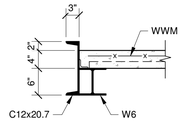
SHEET NUMBER: S401

7/20/2021 2:23:33 PM

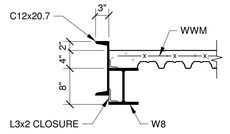
MPM #21015



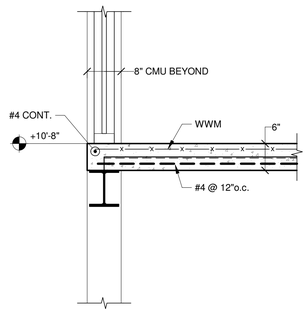
SECTION 9 S402 3/4" = 1'-0"



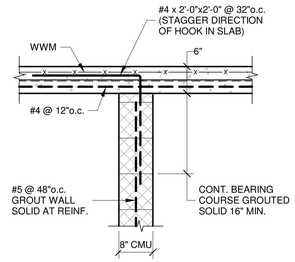
SECTION 10 S402 3/4" = 1'-0"



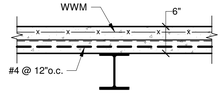
SECTION 11 S402 3/4" = 1'-0"



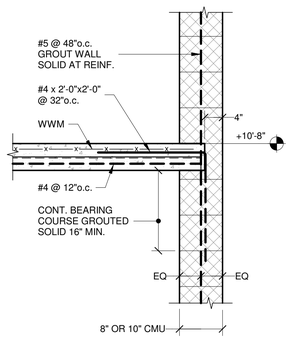
SECTION 5 S402 3/4" = 1'-0"



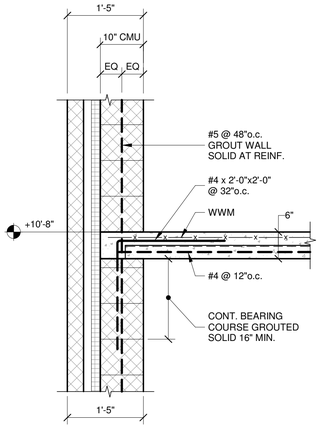
SECTION 6 S402 3/4" = 1'-0"



SECTION 7 S402 3/4" = 1'-0"



SECTION 8 S402 3/4" = 1'-0"



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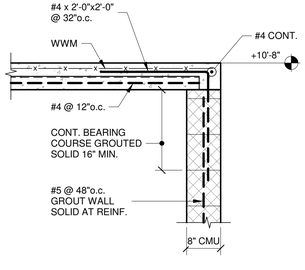

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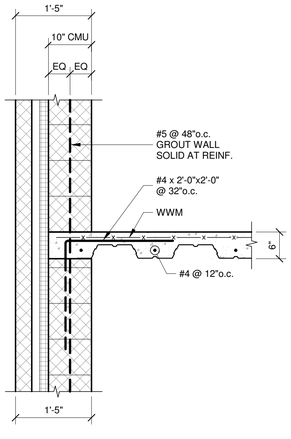

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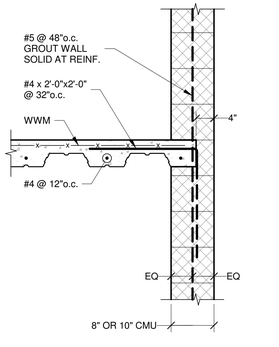

SECTION 4 S402 3/4" = 1'-0"

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NO.	DESCRIPTION	DATE

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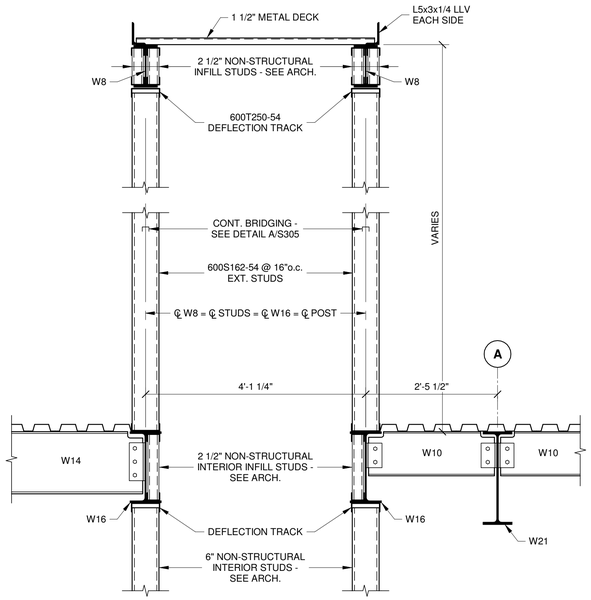
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: SECTIONS

SHEET NUMBER: S402

7/20/2021 2:23:35 PM

MPM #21015



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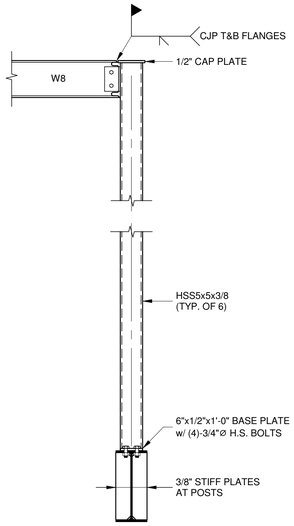

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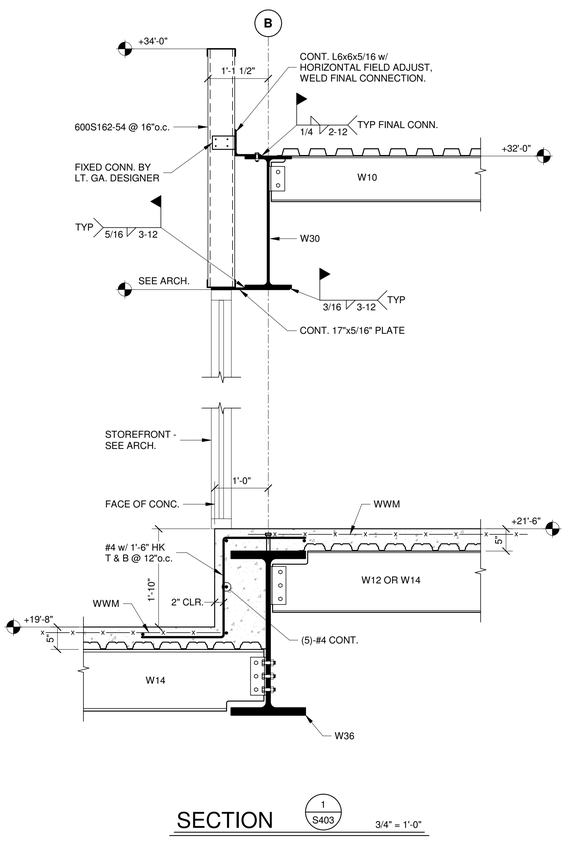

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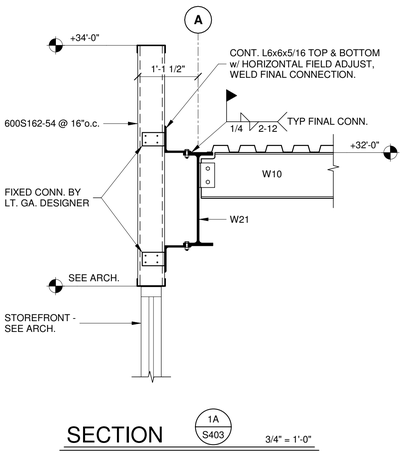

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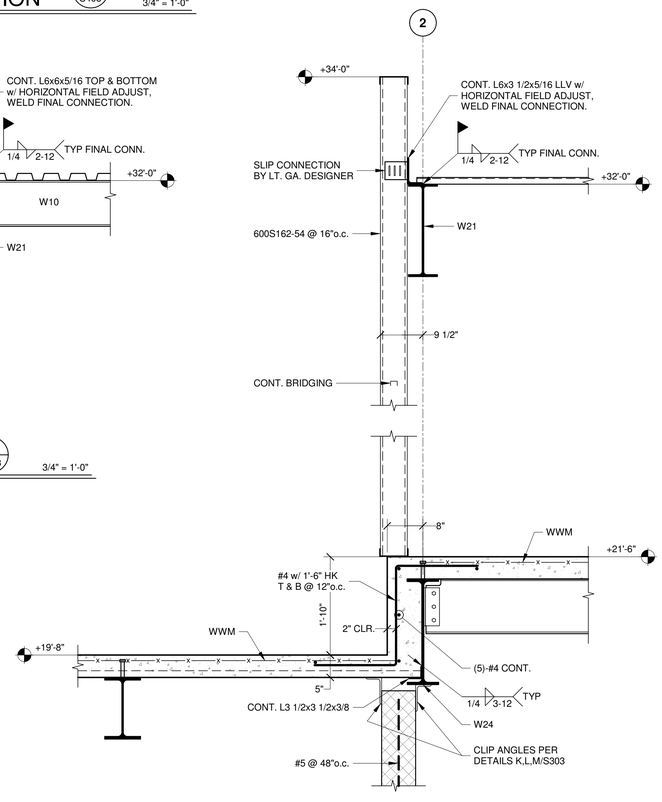

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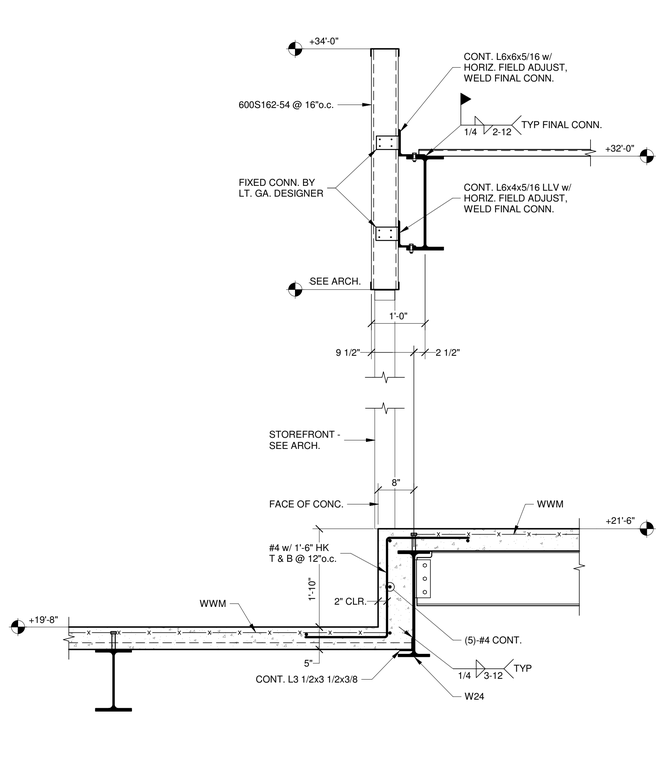

SECTION 3/S403 3/4" = 1'-0"

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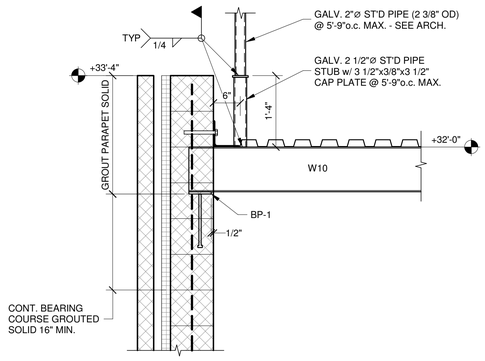
MPM #21015



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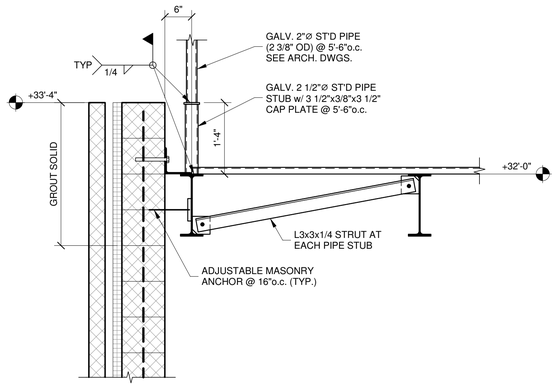

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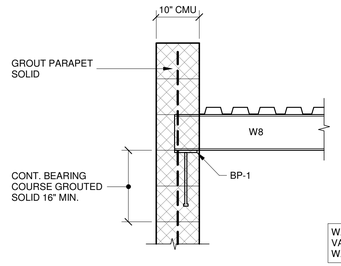
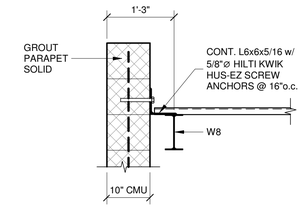


SECTION 7 S404 3/4" = 1'-0"

WALL REINFORCING VARIES. SEE OTHER WALL SECTIONS.



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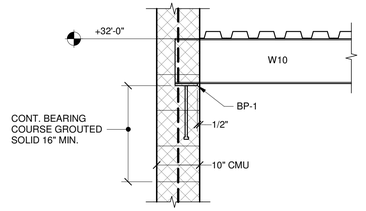

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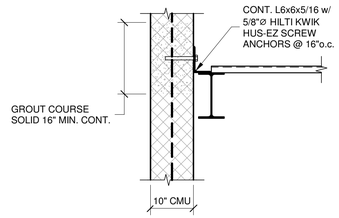

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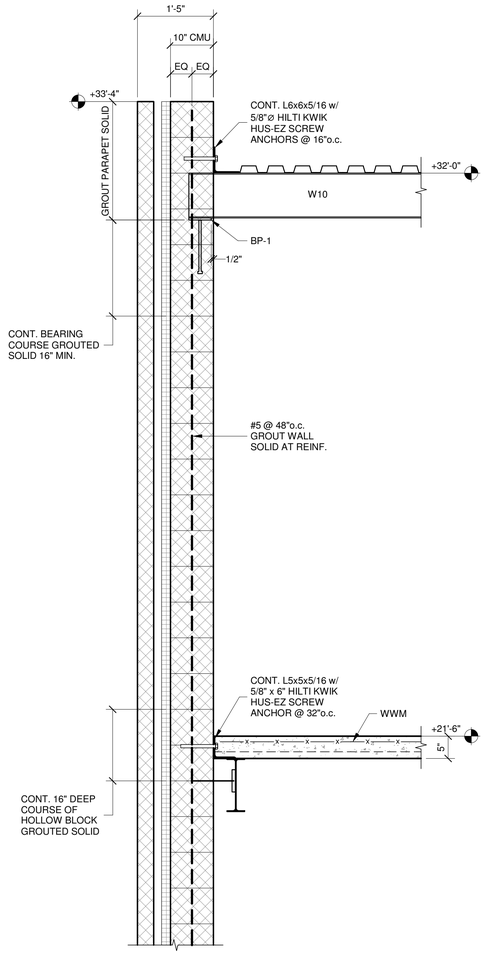
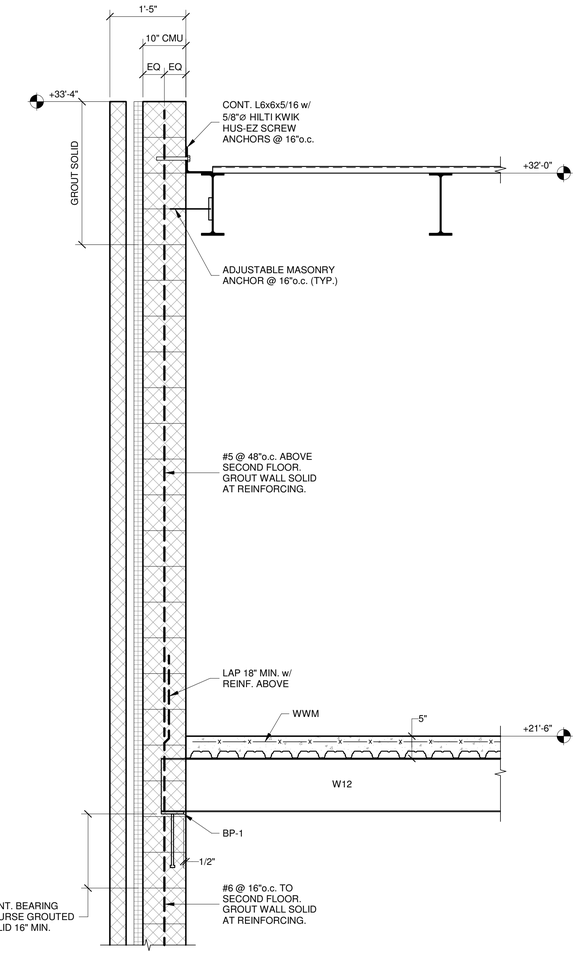


SECTION 1 S404 3/4" = 1'-0"



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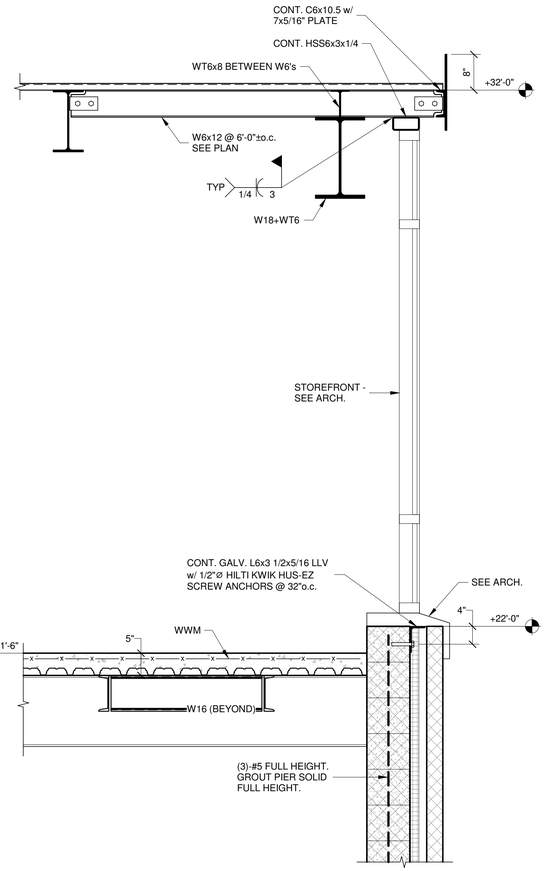

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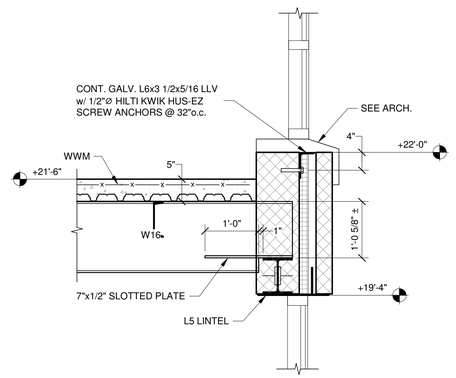

SECTION 3A S404 3/4" = 1'-0"

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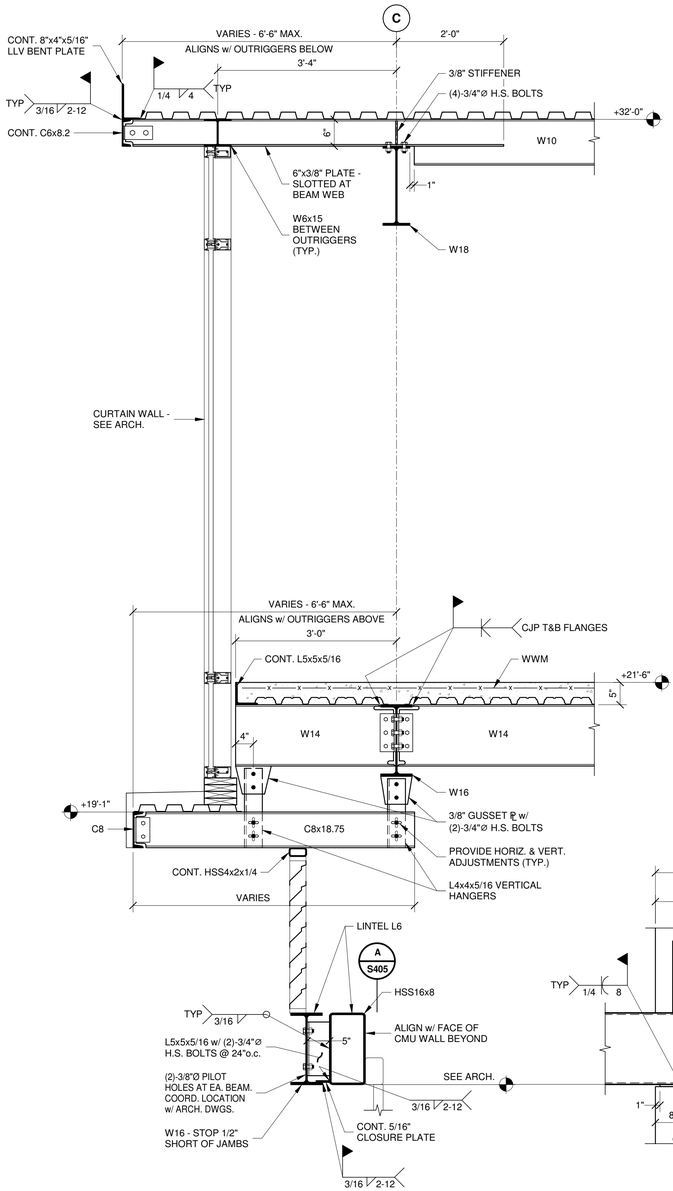
MPM #21015



SECTION 1 S405 3/4" = 1'-0"

DETAIL A S405 3/4" = 1'-0"

LINTEL L6 BEARING AT PIERS

SECTION 2 S405 3/4" = 1'-0"

SECTION 3 S405 3/4" = 1'-0"

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SHEET NUMBER: S405

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MPM #21015

GENERAL MECHANICAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room / 1 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -10' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- PIPING BEING DEMOLISHED

FIRE PROTECTION SYMBOLS

- FP-D — FIRE PROTECTION DRY
- FP-O — FIRE PROTECTION OTHER
- FP-PA — FIRE PROTECTION PRE-ACTION
- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- UPRIGHT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD
- RECESSED SPRINKLER HEAD
- CONCEALED SPRINKLER HEAD
- 'D' REPRESENTS DRY SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
- 48x18 S/A — OBSTRUCTION FROM DUCTWORK 48" AND GREATER

ABBREVIATIONS

Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	ACCESS DOOR
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
E/A	EXHAUST AIR
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FD	FIRE DAMPER
FDV	FIRE DEPARTMENT VALVE
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MUA	MAKE-UP/AIR
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	DUCT RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
RLIA	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
S/A	SUPPLY AIR
SAN	SANITARY
SF	SQUARE FOOT
SD	SMOKE DAMPER
SM	SURFACE MOUNT
SP	STANDPIPE
SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
V	VENT
VAV	VARIABLE AIR VOLUME
VENT	VENTILATION
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WCO	WALL CLEAN OUT
WH	WALL HYDRANT

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

PLUMBING AND PIPING SYMBOLS

CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CD	CONDENSATE DRAINAGE
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
NG	NATURAL GAS
PG	PROPANE GAS
REF-L	REFRIGERANT-LIQUID
REF-S	REFRIGERANT-SUCTION
REF-HG	REFRIGERANT-HOT GAS
STM	STEAM
CDR	CONDENSATE RETURN
CWV	COMBINATION WASTE & VENT
CA	COMPRESSED AIR
CW	DOMESTIC COLD WATER
H-CW	HARD COLD WATER
S-CW	SOFT COLD WATER
F-CW	FILTERED COLD WATER
RO	REVERSE OSMOSIS WATER
HW	HOT WATER
HW 140°	HOT WATER 140°
HW-R	HOT WATER RECIRCULATION
HW-R 140°	HOT WATER RECIRCULATION 140°
GV	GREASE VENT
GW	GREASE WASTE
IW	INDIRECT WASTE
OV	OIL VENT
OW	OIL WASTE
PD	PUMP DISCHARGE
V	SANITARY VENT
SS	SANITARY SEWER
SHWR	SOLAR HOT WATER RETURN
SHWS	SOLAR HOT WATER SUPPLY
SD	STORM DRAINAGE
OSD	OVERFLOW STORM DRAINAGE

- PIPE DROP
- PIPE RISE
- PIPE TEE
- CAP
- 4" 4" 2" — PLUG
- 4" 4" — REDUCING 45 DEGREE TEE
- 45 DEGREE TEE

PIPE ACCESSORY TAGS

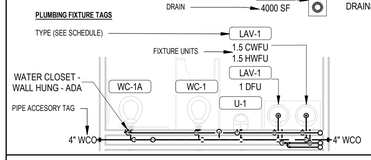
- 2" DOM. WM — DOMESTIC WATER METER
- 2" BALANCING — BALANCING VALVE
- 2" SHUTOFF — 1/4 TURN BALL VALVE
- 2" CHECK — CHECK VALVE
- 2" TMV — 3-WAY MIXING VALVE
- 2" M-CNTRL — MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL — 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV — PRESSURE REDUCING VALVE
- 3/8" SOLENOID — REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY — BUTTERFLY VALVE

DRAIN TAGS

- FLOOR DRAIN — 4" FD-1 — TYPE (SEE SCHEDULE) — 4" AD-6 — AREA DRAIN
- FLOOR DRAIN — 4" FD-3P — "P" - INDICATES PRIMER CONNECTION — 4" SD-29 — DECK DRAIN
- FLOOR SINK — 4" FS-4 — 4" SD-12 — FLOW CONTROL DRAIN
- HUB DRAIN — 4" FD-13 — 8 DFU — FIXTURE UNITS — 4" SD-15 — STORM DRAIN
- ROOF AREA SERVED BY DRAIN — 4000 SF — 6" SD-1 — COMBINATION DRAINS

DRAIN SIZE

PLUMBING FIXTURE TAGS



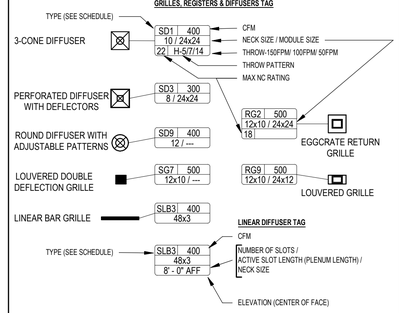
EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLING CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
CH	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CONDENSER WATER PUMP
CHWP	CHILLED WATER PUMP
DBP	DOMESTIC WATER BOOSTER PUMP
DC	DUCT MOUNTED COIL
DCP	DOMESTIC WATER CIRCULATING PUMP
EF	EXHAUST FAN
EDC	ELECTRIC DUCT COIL
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FCU	FAN COIL UNIT
FP	FIRE PUMP
GI	GREASE INTERCEPTOR
GRV	GRAVITY ROOF VENTILATOR
HWP	HEATING WATER PUMP
HX	HEAT EXCHANGER
HRU	HEAT RECOVERY UNIT
PRV	POWER ROOF VENTILATOR
RE	RETURN/EXHAUST FAN
RTU	ROOFTOP UNIT
SEP	SEWAGE EJECTOR PUMP
SF	SUPPLY FAN
SP	SUMP PUMP
UH	UNIT HEATER
WH	WATER HEATER

HVAC SYMBOLS

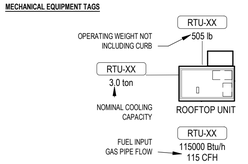
- 16x8 — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 16/8 — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 16Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- DUCT BEING DEMOLISHED
- S/A — SUPPLY AIR
- S-O/A — CONDITIONED OUTSIDE AIR
- R-O/A — OUTSIDE AIR
- R/A — RETURN AIR
- T/A — TRANSFER AIR
- E/A — EXHAUST AIR
- L/A — RELIEF AIR
- GE/A — GREASE EXHAUST AIR
- SE/A — SMOKE EXHAUST AIR
- FLUE — EXHAUST GAS FLUE
- C/A — COMBUSTION AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
- DROP — ROUND RETURN/TRANSFER AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
- DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

GRILLES, REGISTERS & DIFFUSERS TAG



LINEAR DIFFUSER TAG

MECHANICAL EQUIPMENT TAGS

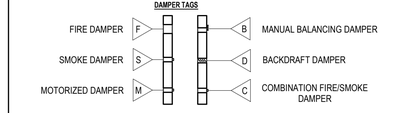


DATA DEVICE TAGS

SYMBOL / EQUIPMENT ID

CARBON DIOXIDE SENSOR	CO2	TH	RTU-XX — TEMPERATURE & HUMIDITY SENSOR
CARBON MONOXIDE SENSOR	CO	TS	VAV-XX — TEMPERATURE SENSOR
NITROGEN DIOXIDE SENSOR	NO2	T	THERMOSTAT
HUMIDITY SENSOR	HS	MS	MANUAL SWITCH
HUMIDISTAT	H	S	SENSOR

DAMPER TAGS



PROJECT GENERAL NOTES

- IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, DRAWINGS AND OTHER CONTRACT DOCUMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO ORDERING OR PROVIDING ANY MATERIALS OR LABOR. THE CONTRACTOR SHALL BID THE MOST STRINGENT REQUIREMENTS.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

HVAC GENERAL NOTES

- CONTRACTOR TO COORDINATE ALL CEILING MOUNTED ITEMS (VRF, GRD) WITH ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH.
- CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES.
- GENERAL PRIME CONTRACTOR SHALL PROVIDE A 3" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
- THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.
- ALL PIPING TO BE RUN PARALLEL/PERPENDICULAR TO STRUCTURE FOR NEAT AND ORDERLY APPEARANCE.
- ALL INDOOR EXPOSED INSULATED PIPING TO BE JACKETED WITH WHITE PVC. SEE SPECIFICATIONS.

MECHANICALSHEET INDEX

SEISMIC & WIND REQUIREMENTS FOR MECHANICAL / PLUMBING SYSTEMS IBC / ASCE-7

THIS FIRE STATION IS ASSIGNED TO SEISMIC DESIGN CATEGORY C AND IS OCCUPANCY / RISK CATEGORY IV AS DEFINED BY CHAPTER 1 OF ASCE-7. ALL HVAC, PLUMBING & FIRE PROTECTION SYSTEMS AND EQUIPMENT ARE REQUIRED FOR THE CONTINUED OPERATION OF THE FIRE STATION AFTER AN EARTHQUAKE AND SHALL BE ASSIGNED A COMPONENT IMPORTANCE FACTOR OF 1.5 IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7.

A. PER SECTION 301.15 OF THE INTERNATIONAL MECHANICAL CODE, MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY.

B. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.

C. FOR ALL COMPONENTS REQUIRING SEISMIC AND/OR WIND RESTRAINT, THE MECHANICAL / PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS PREPARED IN ACCORDANCE WITH THE IBC AND ASCE 7 BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA WHO IS QUALIFIED TO DESIGN SEISMIC RESTRAINT SYSTEMS. SHOP DRAWINGS SHALL INCLUDE SEPARATE DETAILS AND CALCULATIONS FOR EACH SEPARATE SYSTEM, DEVICE, OR ELEMENT. THE APPROVAL OF SEISMIC BRACING SHOP DRAWINGS SHALL BE REQUIRED PRIOR TO THE INSTALLATION OF ANY BUILDING SYSTEMS OR COMPONENTS.

D. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.

E. SEISMIC RESTRAINTS FOR PIPING AND DUCTWORK MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED		RESTRAIN ALL - SEISMIC & WIND	-
FLOOR MOUNTED		RESTRAIN ALL	-
WALL MOUNTED		RESTRAIN ALL	-
COMPONENT SUPPORTS		RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	-
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>2"	4
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 2" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4
DUCTWORK		6 SQ.FT. AND LARGER	5
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 6)		REQUIRED	6

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, T HEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT A. FRENCK — ENGINEER — PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

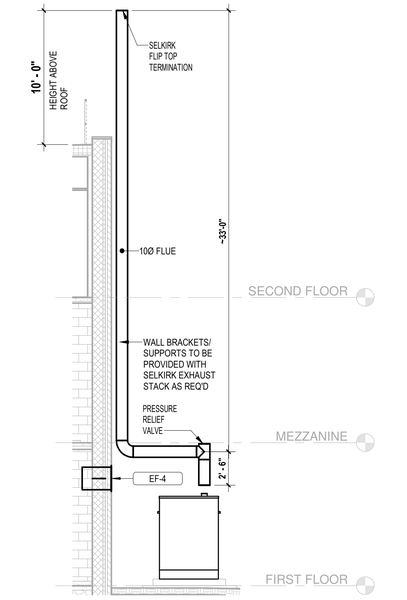
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MECHANICAL TITLE SHEET

SHEET NUMBER: M0.00

7/2/2021 3:27:35 PM

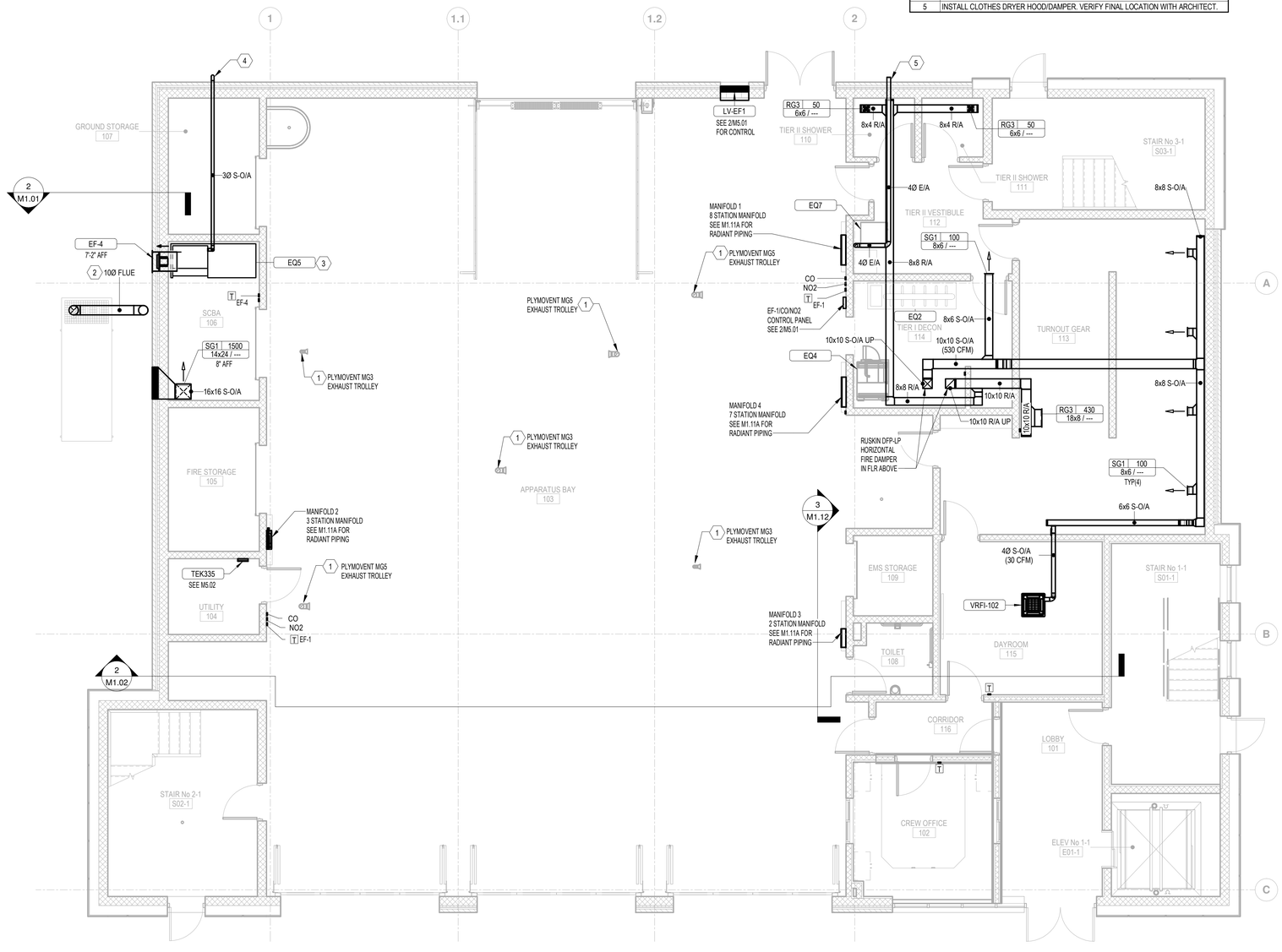


2 GENERATOR SECTION LOOKING WEST

3/16" = 1'-0"

0 4' 8' 12'

KEYNOTES	
Keynote Number	**Keynote Description**
1	NOT IN MECHANICAL PRIME SCOPE. PLYMOVENT EXHAUST SYSTEM PURCHASED / INSTALLED BY OWNER. SHOWN HERE FOR COORIDINATION PURPOSES ONLY.
2	SELKIRK MODEL PS, DOUBLE WALL / 1" AIR SPACE POSITIVE PRESSURE VENTING BY MECHANICAL PRIME CONTRACTOR
3	EQ5 PROVIDED & INSTALLED BY MECHANICAL PRIME CONTRACTOR (SEE EQUIPMENT SCHEDULE), INSTALL 3" PVC OA INTAKE TO SCBA. INCLUDE DRAIN VALVE BELOW FINAL TEE TO SCBA.
4	INSTALL BIRDSCREEN ON SCBA INTAKE. VERIFY FINAL LOCATION WITH ARCHITECT
5	INSTALL CLOTHES DRYER HOOD/DAMPER. VERIFY FINAL LOCATION WITH ARCHITECT.



1 FIRST FLOOR HVAC NEW WORK PLAN

3/16" = 1'-0"

0 4' 8' 12'

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

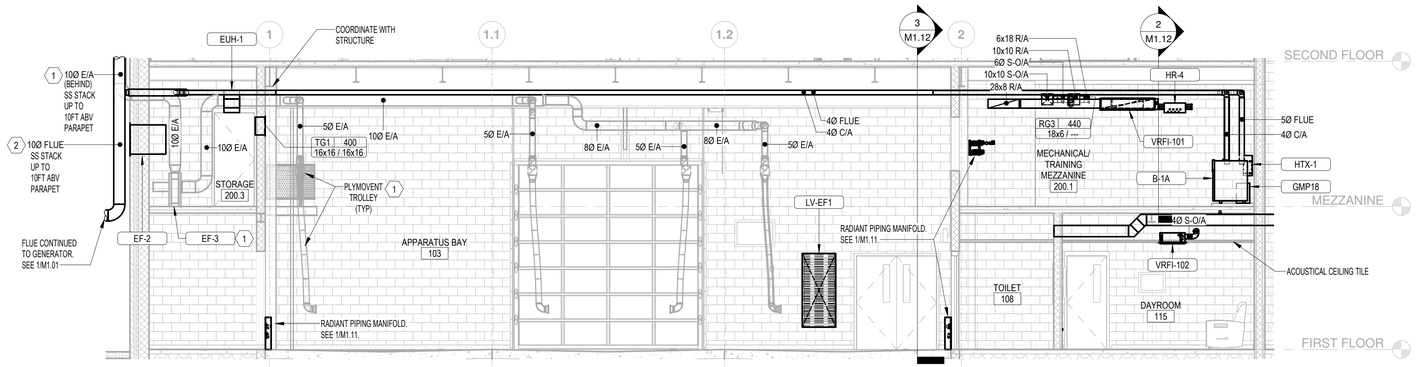
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR HVAC PLAN

SHEET NUMBER: M1.01

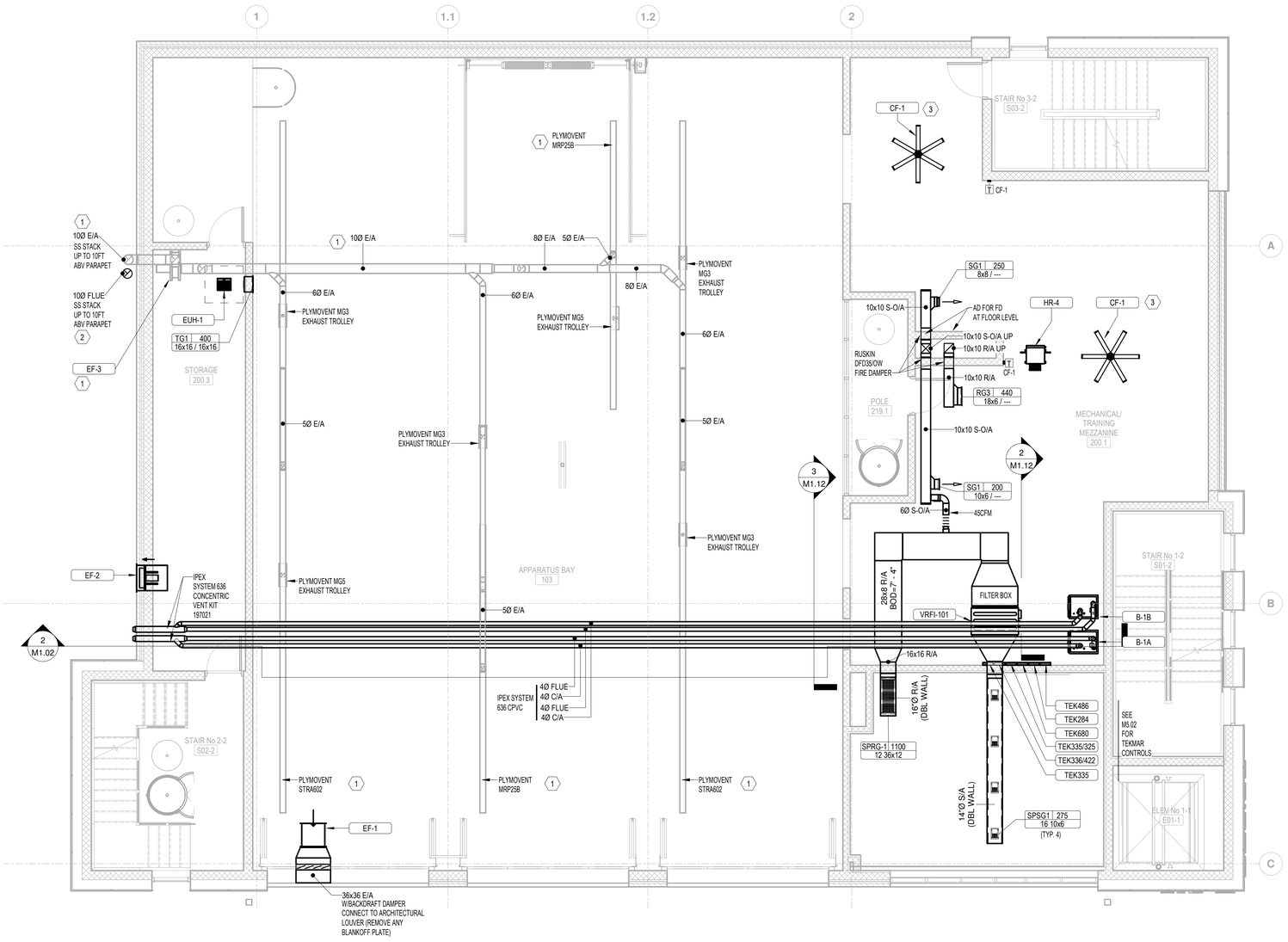
7/2/2021 3:27:38 PM



2 HVAC SECTION LOOKING EAST

3/16" = 1'-0"

0 4' 8' 12'



1 MEZZANINE HVAC NEW WORK PLAN

3/16" = 1'-0"

0 4' 8' 12'

KEYNOTES

Keynote Number	Keynote Description
1	NOT IN MECHANICAL PRIME SCOPE. PLYMOVENT EXHAUST SYSTEM PURCHASED / INSTALLED BY OWNER. SHOWN HERE FOR COORIDINATION PURPOSES ONLY.
2	SELKIRK MODEL PS, DOUBLE WALL / 1" AIR SPACE POSITIVE PRESSURE VENTING BY MECHANICAL PRIME CONTRACTOR
3	MOUNT TO METAL DECK. BOTTOM OF FAN ELEVATION ~8'-2"

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

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1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: MEZZANINE HVAC PLAN
SHEET NUMBER: M1.02

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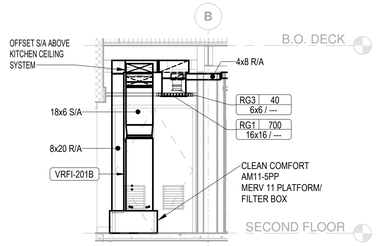
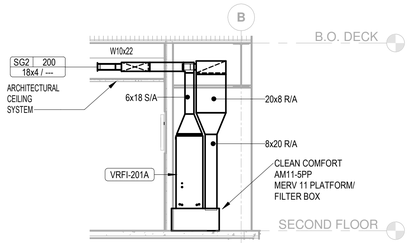


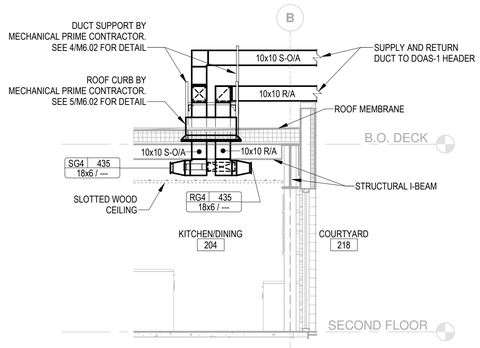
2 VRF-201B SECTION LOOKING NORTH

1/4" = 1'-0"



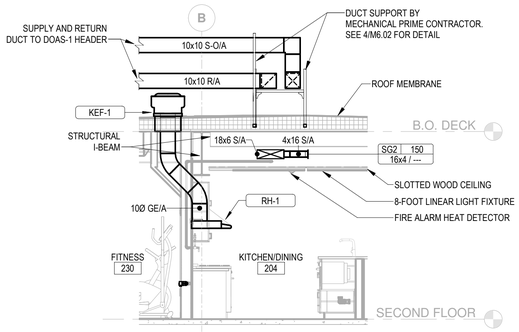
3 VRF-201A SECTION LOOKING NORTH

1/4" = 1'-0"



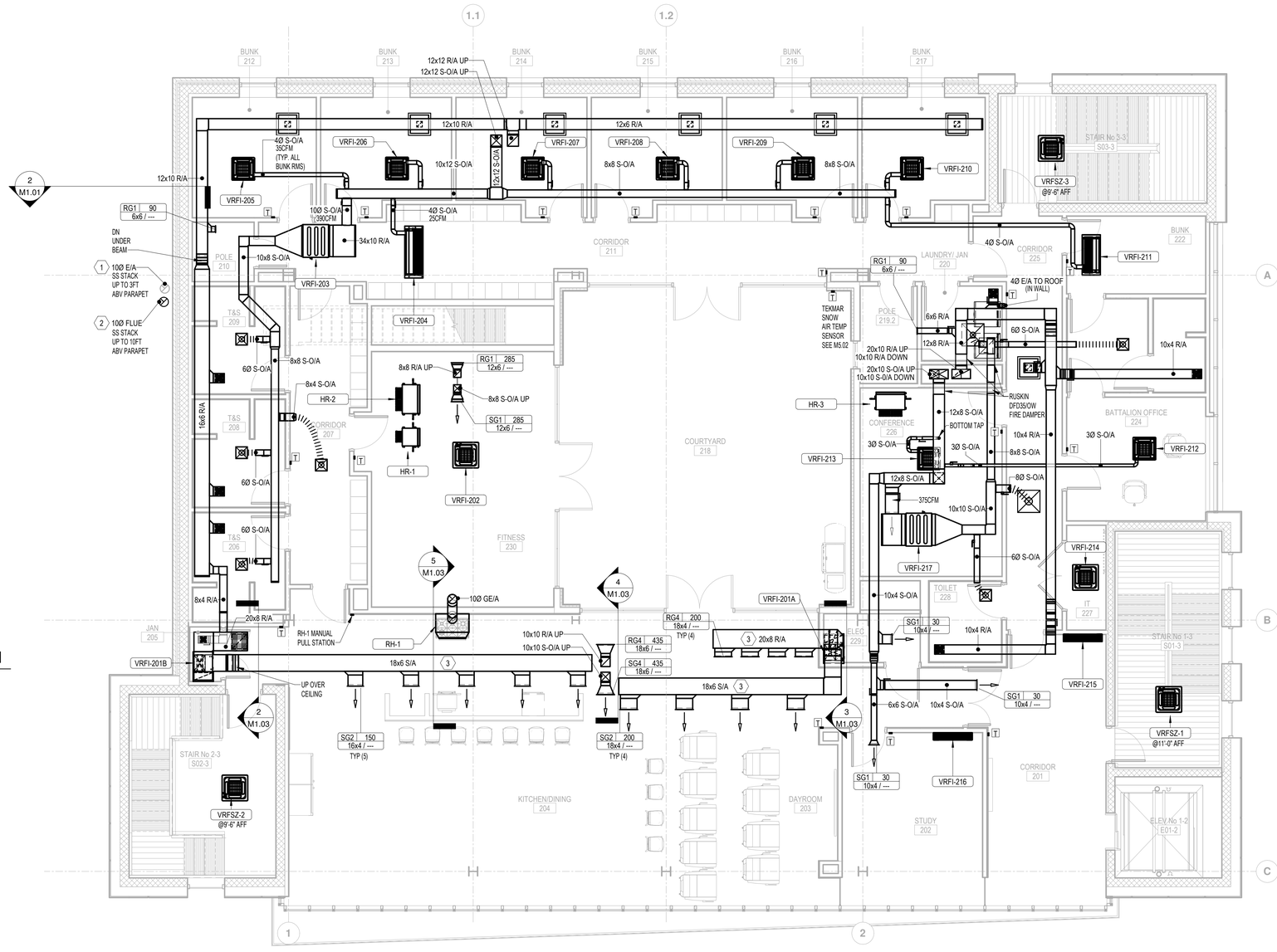
4 KITCHEN/DINING 204 SECTION LOOKING NORTH

1/4" = 1'-0"



5 KITCHEN/DINING 204 SECTION LOOKING SOUTH

1/4" = 1'-0"



1 SECOND FLOOR HVAC NEW WORK PLAN

3/16" = 1'-0"

KEYNOTES

Keynote Number	Keynote Description
1	NOT IN MECHANICAL PRIME SCOPE. PLYMOVENT EXHAUST SYSTEM PURCHASED / INSTALLED BY OWNER. SHOWN HERE FOR COORDINATION PURPOSES ONLY.
2	SELKIRK MODEL PS, DOUBLE WALL / 1" AIR SPACE POSITIVE PRESSURE VENTING BY MECHANICAL PRIME CONTRACTOR
3	DUCTWORK/GRDS INSTALLED ABOVE ARCHITECTURAL CEILING SYSTEM. INSULATE WITH BLACK ARMAFLEX INSULATION (ALL INSULATION, FITTING SEEMS, TAPE, ETC. SHALL BE BLACK)

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CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

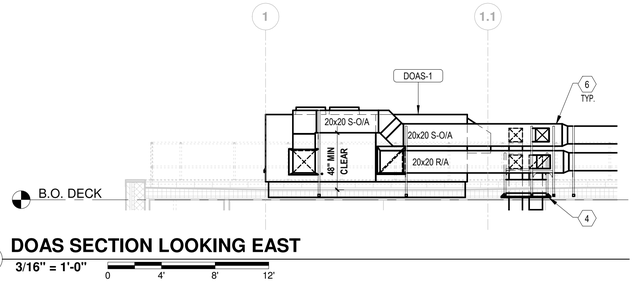
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR HVAC PLAN

SHEET NUMBER: M1.03

7/2/2021 3:27:57 PM

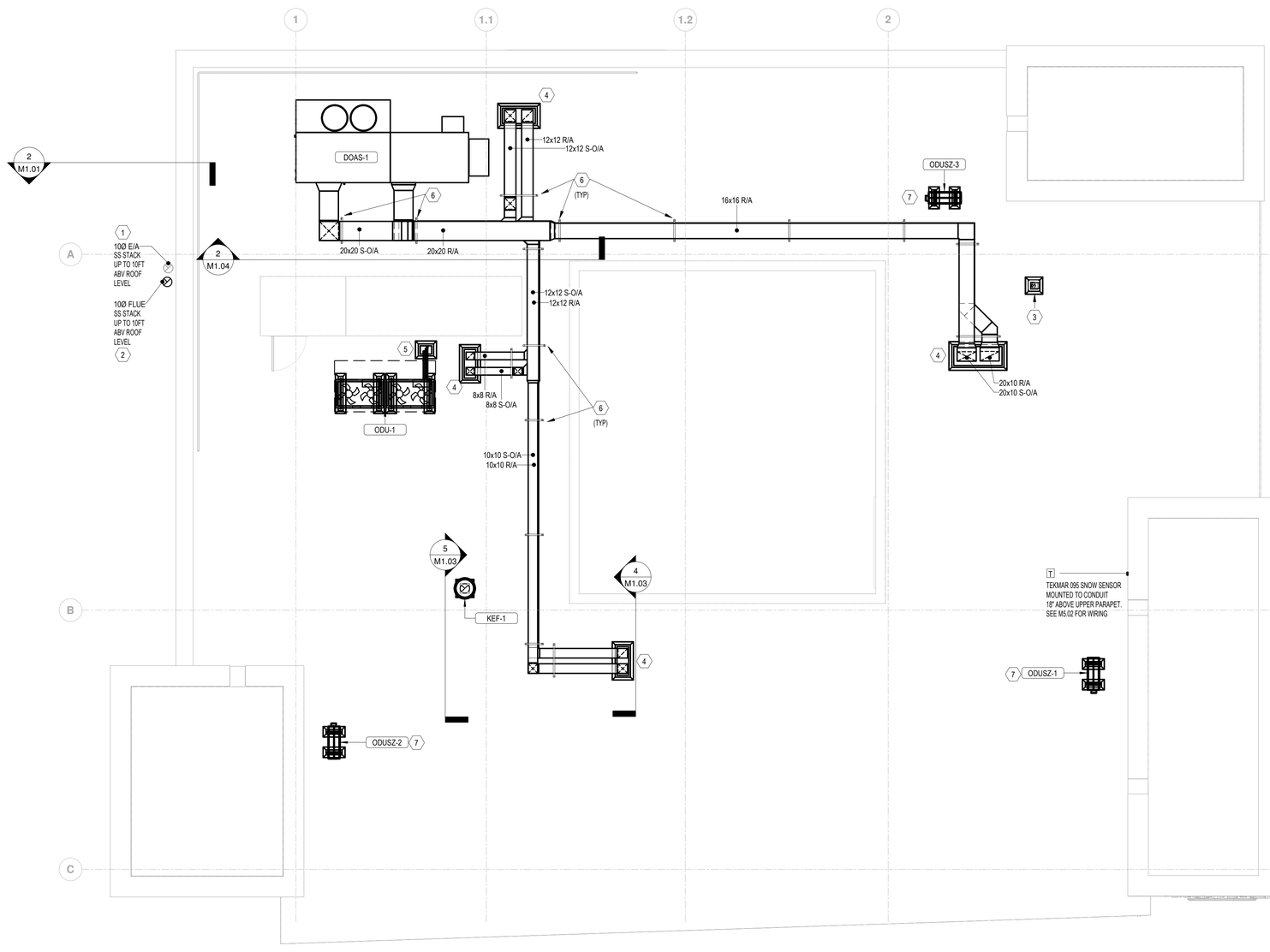


2 DOAS SECTION LOOKING EAST

3/16" = 1'-0"

0 4' 8' 12'

KEYNOTES	
Keynote Number	**Keynote Description**
1	NOT IN MECHANICAL PRIME SCOPE. PLYMOVENT EXHAUST SYSTEM PURCHASED / INSTALLED BY OWNER. SHOWN HERE FOR COORIDINATION PURPOSES ONLY.
2	SELKIRK MODEL G, SINGLE WALL POSITIVE PRESSURE VENTING BY MECHANICAL PRIME CONTRACTOR
3	DRYERJACK MODEL DJK486U ON 12"x12" CURB
4	DUCT THROUGH ROOF. SEE 5/M6.02
5	PIPE THROUGH ROOF. SEE 4/M6.01
6	DUCT SUPPORT. SUPPORT BY MECHANICAL PRIME CONTRACTOR, SEE 4/M6.02
7	INSTALL 10'-0" MINIMUM AWAY FROM PARAPET.



1 ROOF HVAC NEW WORK PLAN

3/16" = 1'-0"

0 4' 8' 12'

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1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

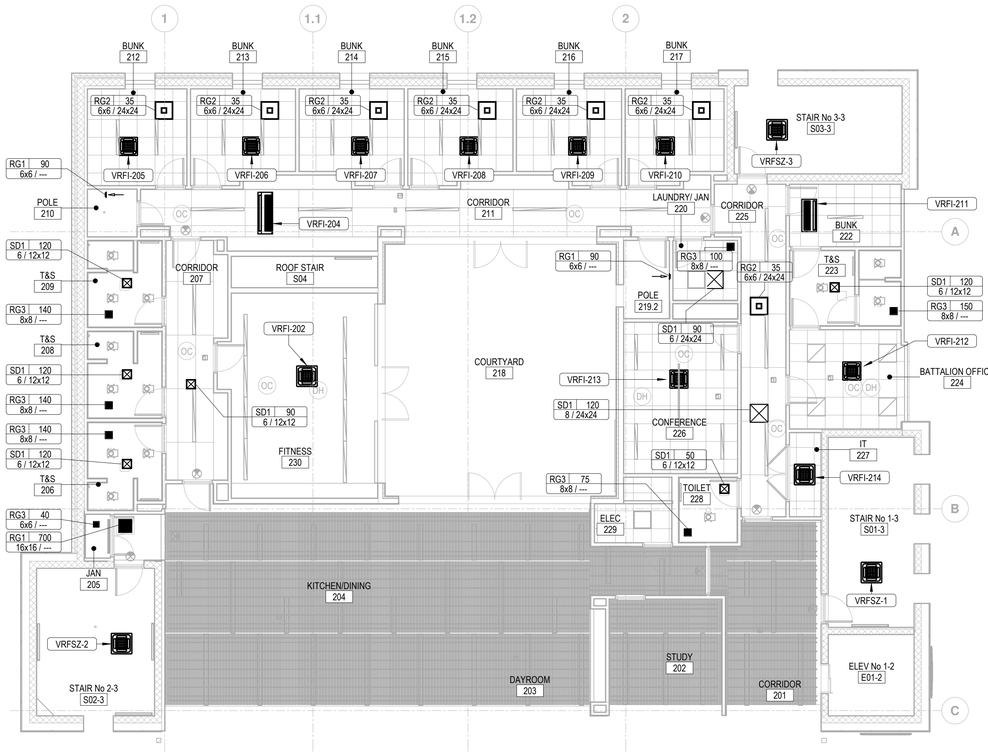
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: ROOF HVAC PLAN

SHEET NUMBER: M1.04

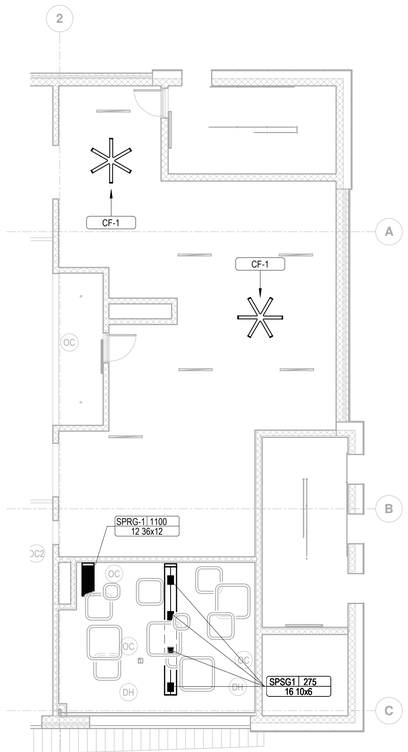
7/2/2021 3:28:03 PM



3 SECOND FLOOR HVAC REFLECTED CEILING PLAN

1/8" = 1'-0"

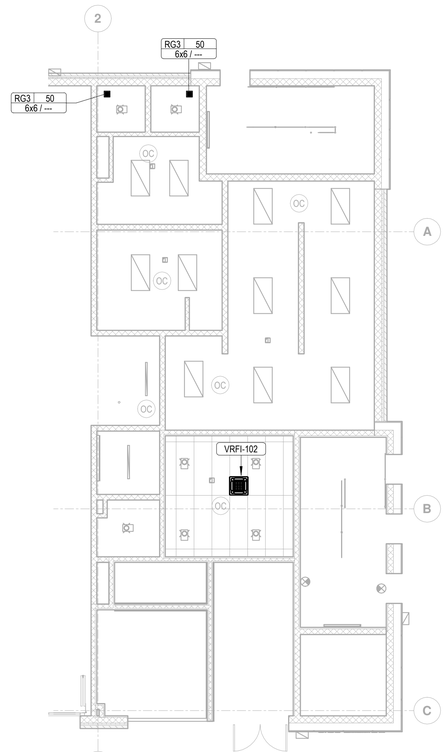
0 8' 16' 32'



2 PARTIAL CEILING PLAN - MEZZANINE

1/8" = 1'-0"

0 8' 16' 32'



1 PARTIAL HVAC CEILING PLAN - FIRST FLOOR

1/8" = 1'-0"

0 8' 16' 32'

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: HVAC REFLECTED CEILING PLANS

SHEET NUMBER: M1.05

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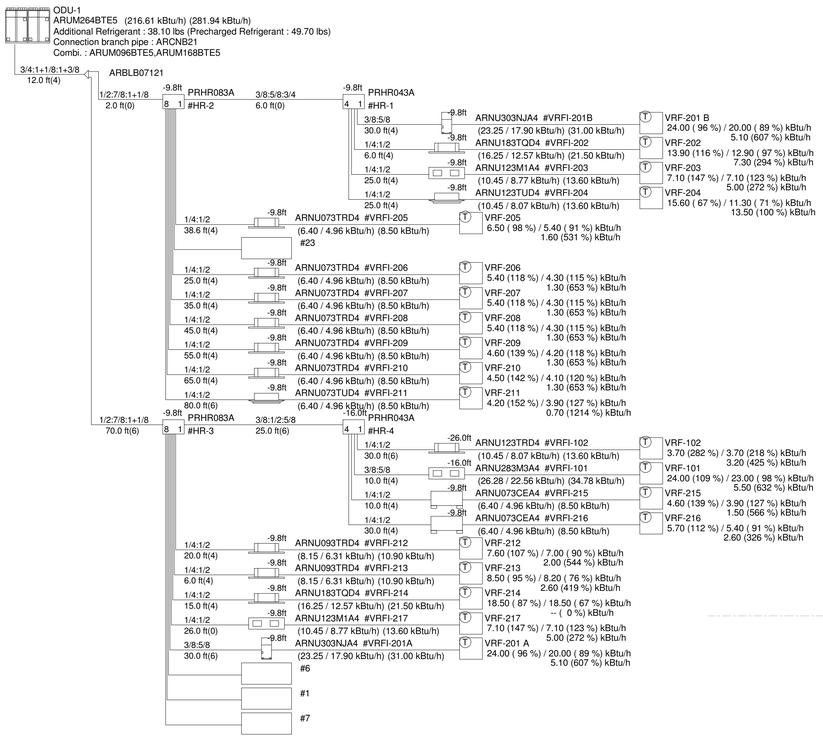


2 DETAIL - VRF PIPING SCHEMATIC

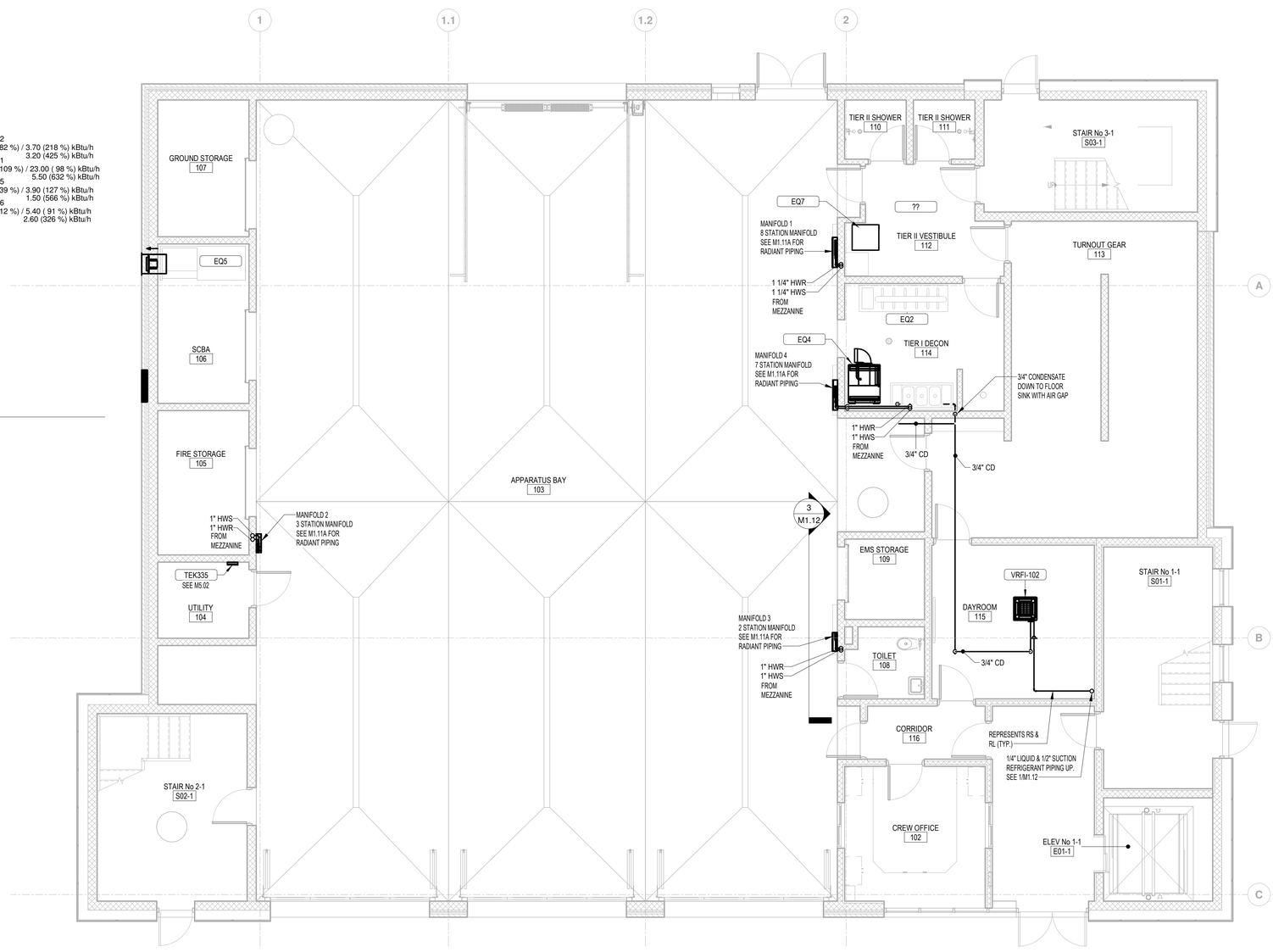
NOT TO SCALE

VRF PIPING NOTES

- SINGLE LINE REFRIGERANT PIPE FOR SCHEMATIC PURPOSES. PIPING SHALL BE 3-PIPE SYSTEM FROM VRFO TO HRU. PIPING SHALL BE 2- PIPE SYSTEM FROM HRU TO VRFI
- ALL REFRIGERANT PIPING SIZE AND ACCESSORIES AS RECOMMENDED BY EQUIPMENT MANUFACTURER. CONTRACTOR MUST SIZE BASED UPON AS INSTALLED CONDITIONS (TYP.)
- ALL CONDENSATE PIPING TO BE COPPER TYPE L WITH INSULATION

GENERAL NOTES

- THERE SHALL BE NO EXPOSED PIPING ON WALLS IN APPARATUS BAY AREA. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.
- RADIANT HEAT PIPING SHALL BE INSTALLED IN WALL AT LOCATIONS SHOWN ON DRAWINGS.
- RUN ALL PIPING AS CLOSE TO BOTTOM OF STEEL AS POSSIBLE. COORDINATE WITH OTHER TRADES.



1 FIRST FLOOR HYDRONIC FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

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SEAL:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123

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EXP DATE: 9-30-21

CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER:
20-088

PROJECT SET:
23A MECHANICAL RE-BID

DATE ISSUED:
09/13/2021

DRAWING TITLE:
FIRST FLOOR
MECHANICAL PIPING

SHEET NUMBER:
M1.11

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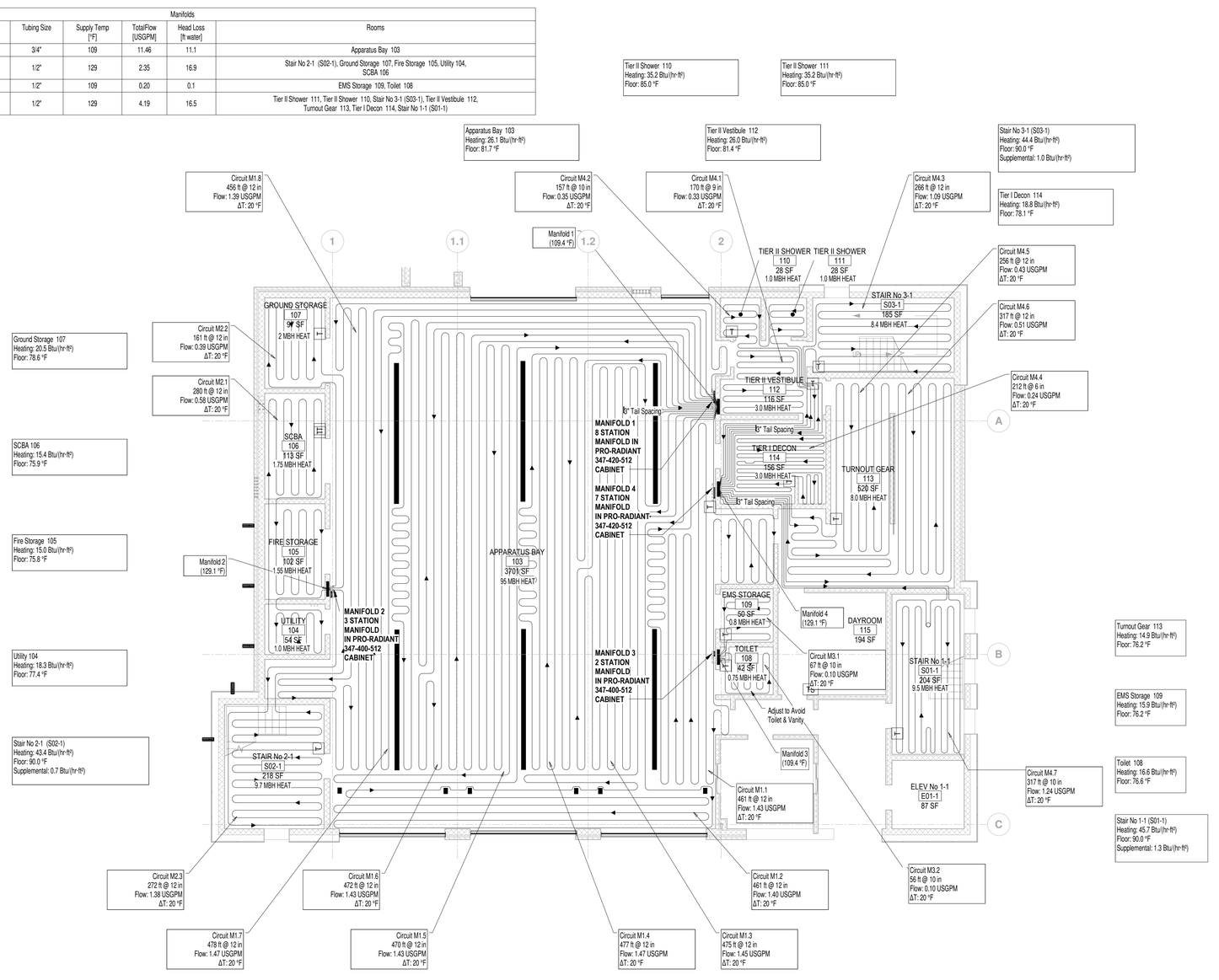
GENERAL NOTES

- THERE SHALL BE NO EXPOSED PIPING ON WALLS IN APPARATUS BAY AREA. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.
- RADIANT HEAT PIPING SHALL BE INSTALLED IN WALL AT LOCATIONS SHOWN ON DRAWINGS.

Manifolds							
Name	ManifoldType	# Circuits	Tubing Size	Supply Temp [°F]	TotalFlow [USGPM]	Head Loss [ft water]	Rooms
Manifold 1	PRO-BALANCE 1" ST	8	3/4"	109	11.46	11.1	Apparatus Bay 103
Manifold 2	PRO-BALANCE 1" ST	3	1/2"	129	2.35	16.9	Stair No 2-1 (S02-1), Ground Storage 107, Fire Storage 105, Utility 104, SCBA 106
Manifold 3	PRO-BALANCE 1" ST	2	1/2"	109	0.20	0.1	EMS Storage 109, Toilet 108
Manifold 4	PRO-BALANCE 1" ST	7	1/2"	129	4.19	16.5	Tier II Shower 111, Tier II Shower 110, Stair No 3-1 (S03-1), Tier II Vestibule 112, Turnout Gear 113, Tier I Decon 114, Stair No 1-1 (S01-1)

Circuit Information					
Number	Length [ft]	Tube Size	Manifold	Flow [USGPM]	Head Loss [ft water]
M1.1	461	3/4"	Manifold 1	1.43	6.1
M1.2	461	3/4"	Manifold 1	1.40	5.9
M1.3	475	3/4"	Manifold 1	1.45	6.4
M1.4	477	3/4"	Manifold 1	1.47	6.6
M1.5	470	3/4"	Manifold 1	1.43	6.2
M1.6	472	3/4"	Manifold 1	1.43	6.3
M1.7	478	3/4"	Manifold 1	1.47	6.7
M1.8	456	3/4"	Manifold 1	1.39	5.7
M2.1	280	1/2"	Manifold 2	0.58	3.7
M2.2	161	1/2"	Manifold 2	0.39	1.1
M2.3	272	1/2"	Manifold 2	1.38	16.4
M3.1	67	1/2"	Manifold 3	0.10	0.0
M3.2	56	1/2"	Manifold 3	0.10	0.0
M4.1	170	1/2"	Manifold 4	0.33	0.8
M4.2	157	1/2"	Manifold 4	0.35	0.9
M4.3	266	1/2"	Manifold 4	1.09	10.5
M4.4	212	1/2"	Manifold 4	0.24	0.6
M4.5	256	1/2"	Manifold 4	0.43	2.0
M4.6	317	1/2"	Manifold 4	0.51	3.4
M4.7	317	1/2"	Manifold 4	1.24	15.9



1 FIRST FLOOR RADIANT FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 12'

NOTE: SEE M1.11, M1.12 AND M5.02 FOR PIPING AND CONTROLS

P T

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CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR RADIANT FLOOR PLAN

SHEET NUMBER: M1.11A

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VRF PIPING NOTES

- SINGLE LINE REFRIGERANT PIPE FOR SCHEMATIC PURPOSES. PIPING SHALL BE 3-PIPE SYSTEM FROM VRFO TO HRU. PIPING SHALL BE 2- PIPE SYSTEM FROM HRU TO VRFI
- ALL REFRIGERANT PIPING SIZE AND ACCESSORIES AS RECOMMENDED BY EQUIPMENT MANUFACTURER. CONTRACTOR MUST SIZE BASED UPON AS INSTALLED CONDITIONS (TYP.)

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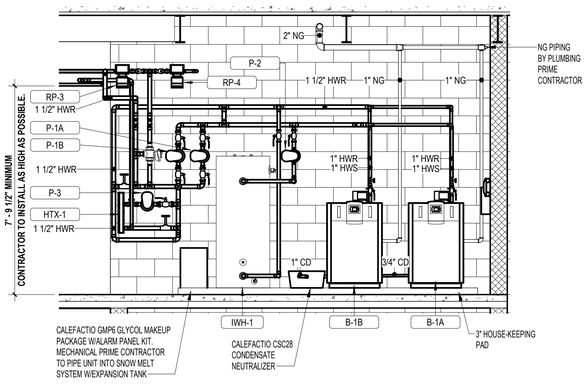
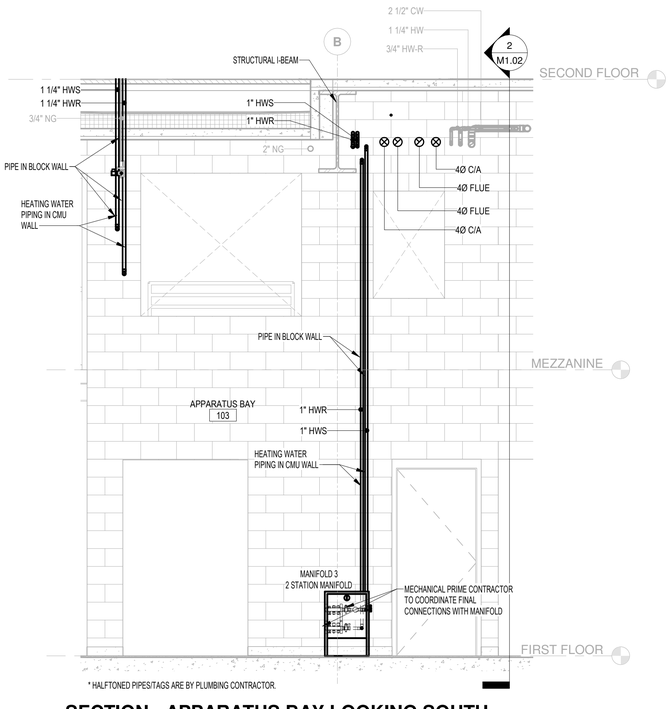


2 SECTION: BOILER/HEATING HOT WATER SYSTEM PIPING

3/8" = 1'-0"

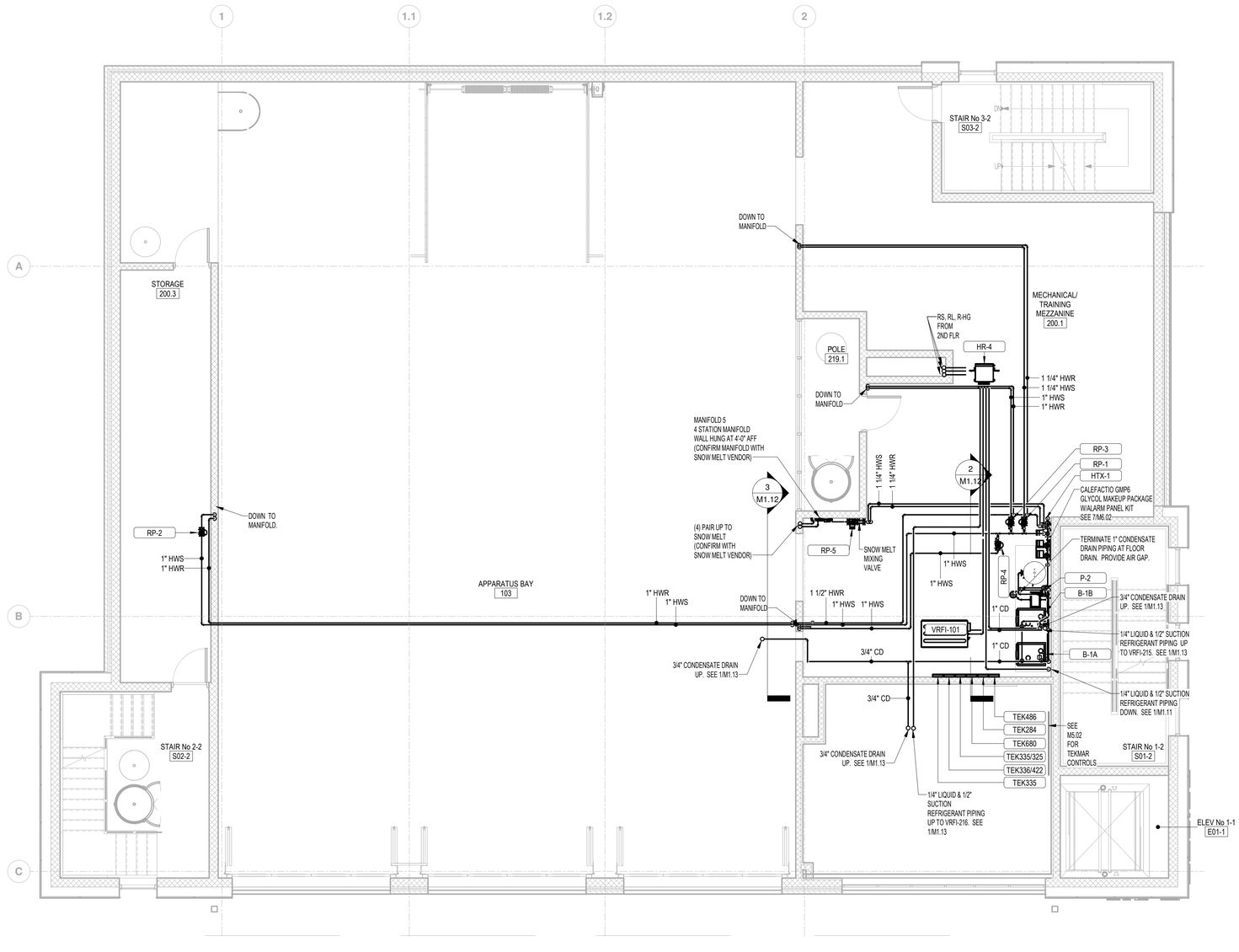
0 2' 4' 6'



3 SECTION - APPARATUS BAY LOOKING SOUTH

3/8" = 1'-0"

0 2' 4' 6'



1 MEZZANINE HYDRONIC FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE MECHANICAL PIPING

SHEET NUMBER: M1.12

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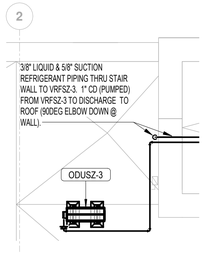
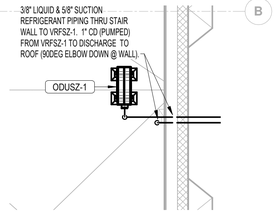


3 SOUTHEAST ROOF HYDRONIC PLAN

3/16" = 1'-0"

0 4' 8' 12'



4 SOUTHWEST ROOF HYDRONIC PLAN

3/16" = 1'-0"

0 4' 8' 12'

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- ALL CONDENSATE PIPING TO BE COPPER TYPE L WITH INSULATION

GENERAL NOTES

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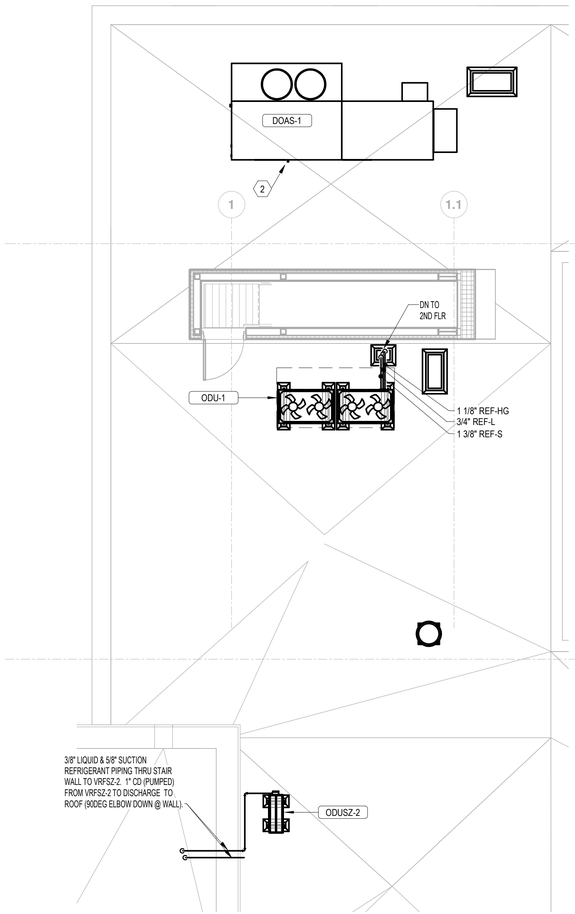
- RADIANT HEAT PIPING SHALL BE INSTALLED IN WALL AT LOCATIONS SHOWN ON DRAWINGS.

KEYNOTES

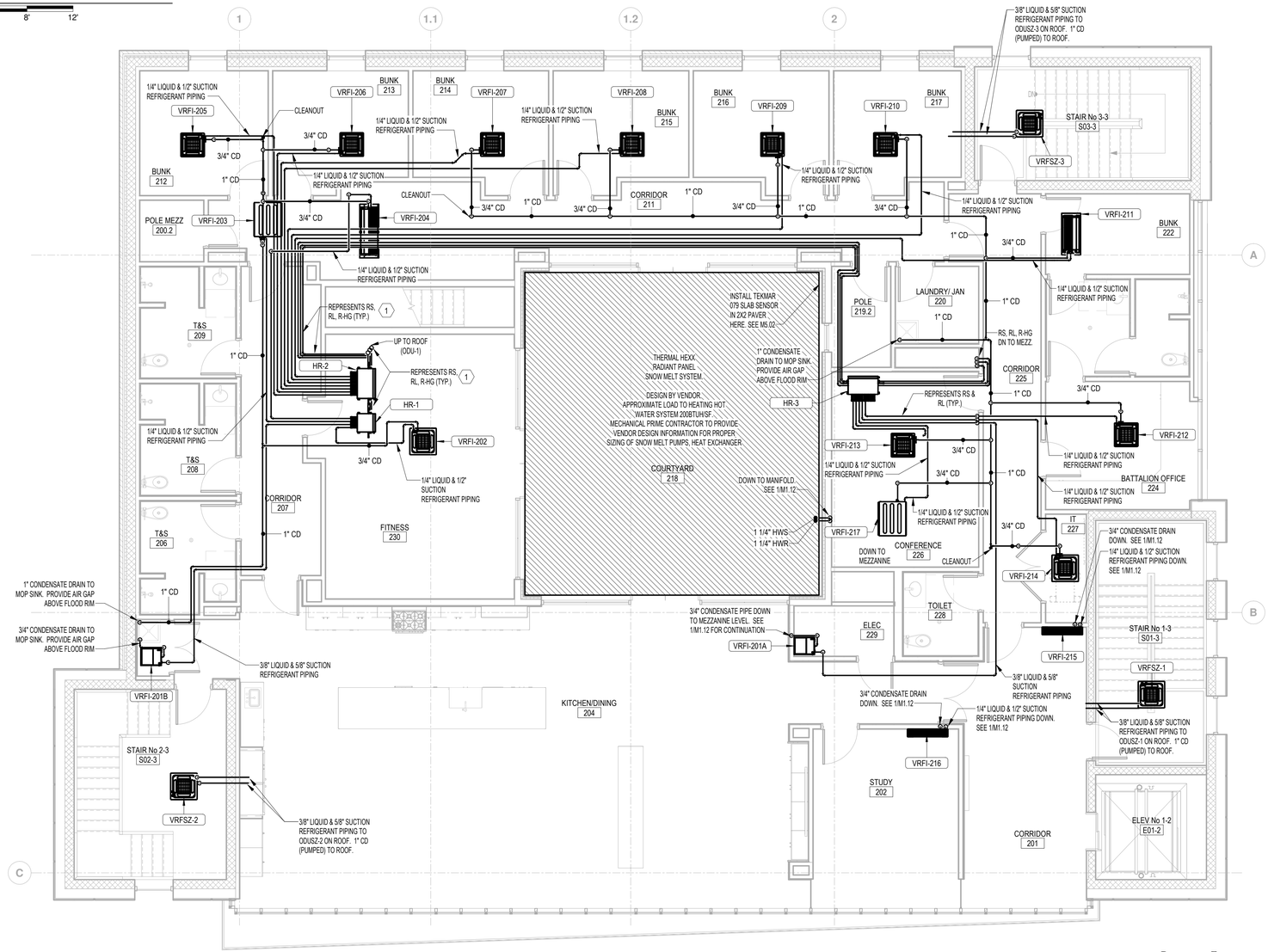
Keynote Number	Keynote Description
1	ALL PIPING TO BE RUN PARALLEL/PERPENDICULAR TO STRUCTURE FOR NEAT AND ORDERLY APPEARANCE THROUGHOUT
2	ROUTE DOAS-1 SURFACE CONDENSATE PIPE TO NEAREST ROOF DRAIN



2 NORTH ROOF HYDRONIC PLAN

3/16" = 1'-0"

0 4' 8' 12'



1 SECOND FLOOR HYDRONIC FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR/PARTIAL ROOF MECHANICAL PIPING

SHEET NUMBER: M1.13

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DEDICATED OUTDOOR AIR SYSTEM (DOAS-1) SCHEDULE

ARDE-112-36-30H-10D-C

Unit Performance

Design Conditions						
Elevation (ft)	Summer DB (F)	Summer WB (F)	Winter DB (F)	Supply (CFM)	Outdoor Air (CFM)	Exhaust Air (CFM)
154	95.0	78.0	10.0	2,900	2,900	2,900

Unit Specifications							
Qty	Weight (lb)	Cooling Type	Heating Type	Unit Installation	Unit ETL Listing	Furnace ETL Listing	
1	3,354 (+/- 5%)	Packaged DX	Indirect Gas	Outdoor	UL/cUL 1995	ANSI Z83.8 / CSA 2.6	

Configuration			
Outdoor Air		Exhaust Air	
Intake	Discharge	Intake	Discharge
End	Side	Access Side	Side

ASHRAE 90.1-2016 Compliance			
	ASHRAE 90.1 Min. Efficiency	Calculated Efficiency	Compliance
ISMRE	5.2	6.5	✓
Enthalpy Recovery Ratio (%)	50	63.4	✓

Energy Recovery Performance								
Design Condition	Temperature (F)							Capacity Reduction (BTU/h)
	Outdoor Air		Supply Air		Return Air		Exhaust Air	
	DB	WB	DB	WB	DB	WB/RH	DB	WB
Summer	95.0	78.0	82.0	68.9	75.1	62.5/49.8	87.9	72.8
Winter	10.0	7.7	48.7	40.9	72.0	55.6/35	31.6	28.7
								121,208.0

Cooling Specifications						
Type	Total Capacity (MBH)	Sensible Capacity (MBH)	Lead Compressor Type	Coil (DB/WB)		Reheat
				EAT (F)	LAT (F)	Capacity (MBH)
Packaged DX	128.1	83.6	Digital Scroll	82.0 / 68.9	55.8 / 55.1	63.6
						76.1

Heating Specifications								
Type	Gas Type	Input (MBH)	Output (MBH)	Temperature Rise		Turndown	Performance	
				Min (F)	Max (F)		EAT (F)	LAT (F)
Indirect Gas	Natural	100.0	80.0	2.0	26.0	16:1	48.7	74.1

Air Performance							
Type	Total Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	FRPM	Fan		
					Qty	Type	Drive-Type
Supply	2,900	2	4.2	2102	1	Plenum	Direct
Exhaust	2,900	2	3.657	2084	1	Plenum	Direct

Motor Specifications						
Motor	Qty	Operating Power (hp)	Size (hp)	Enclosure	Efficiency	RPM
Supply	1	3.15	5	ODP	PE	1750
Exhaust	1	3.07	5	ODP	PE	1750

Electrical Specifications				
Power Supply	Rating (V/C/P)	MCA (A)	MOP (A)	Fan Power (W/CFM)*
Unit	230/60/3	74.0	90.0	1.598

*Fan Power (W/CFM) = (Supply BHP + Exhaust BHP) / Supply CFM

Supply Fan Charts And Performance

Supply Fan Performance								
Total Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	RPM	Operating Power (hp)	Motor		Fan	
					Qty	Size (hp)	Qty	Type	Drive-Type
2,900	2	4.2	2102	3.15	1	5	1	Plenum	Direct

Pressure Drop (in. wg)					
Weatherhood	Filter	Damper	Cooling	Heating	External	Total
0.06	0.192	0.03	0.165	0.558	2	4.2

Sound Performance in Accordance with AMCA										
Sound Power by Octave Band								Lwa	dBA	Sones
62.5	125	250	500	1000	2000	4000	8000			
76	82	85	78	71	67	74	64	81	69	18

Exhaust Fan Charts And Performance

Exhaust Fan Performance								
Total Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	RPM	Operating Power (hp)	Motor		Fan	
					Qty	Size (hp)	Qty	Type	Drive-Type
2,900	2	3.657	2084	3.07	1	5	1	Plenum	Direct

Pressure Drop (in. wg)						
Weatherhood	Filter	Damper	Cooling	Heating	External	Total
0.11					2	3.657

Sound Performance in Accordance with AMCA										
Sound Power by Octave Band								Lwa	dBA	Sones
62.5	125	250	500	1000	2000	4000	8000			
82	73	81	74	71	68	68	63	78	66	15

Cooling Performance

Cooling Specifications							
Nominal Tonnage	Entering Air (F)		Leaving Air (F)		Capacity (MBH)		Condensing Ambient Temp (F)
	DB	WB	DB	WB	Total	Sensible	
10.0	82.0	68.9	55.8	55.1	128.1	83.6	95.0

Coil Information								
PDX Coil Model	Fins Per Inch	Rows Deep	Face Vel. (ft/min)	Coil PD (in. wg)	Refrigerant	Refrig. Velocity (ft/min)	Face Area (ft2)	Suction Temp (F)
DX38S04S12-42x42.5.LH	12	4	234	0.165	R-410A	1,303	11.8	46.7

Compressor Details						
Lead Compressor Type	Compressor Qty	Compressor RLA (A)		Compressor LRA (A)		
		Comp. #1	Comp. #2	Comp. #1	Comp. #2	
Digital Scroll	2	17.9	16	110	110	

Unit Details
Refrigerant charges provided by the factory are approximate and may require adjustment in the field.
Hermetic scroll type compressors
Compressors mounted on neoprene vibration isolation
Crankcase heater on compressor(s)
Thermostatic expansion valve
Stainless steel double sloped drain pan
Moisture-indicating sight glass
Solenoid/metering valves
Refrigerant low pressure switch (auto reset)
Refrigerant high pressure switch (manual reset)
Liquid-Line filter drier
Multiple low sound condensing fans with Lead ECM condensing fan for modulating head pressure control
Digital scroll compressor

Heating Performance

Heating Specifications								
Type	Gas Type	Input (MBH)	Output (MBH)	Temperature Rise		Turndown	Performance	
				Min (F)	Max (F)		EAT (F)	LAT (F)
Indirect Gas	Natural	100.0	80.0	2.0	26.0	16:1	48.7	74.1

Unit Details
ANSI standard Z83.8 and CSA 2.6
High Thermal efficiency
Direct spark ignition
3/4" Gas Connection
At least 6 in. wg of natural gas pressure (14 in. wg for LP) is required at the units gas connection in order to achieve maximum performance
Power Venting
24 Volt Control Power
Stainless Steel heat exchange tubes
Discharge temperature assumes proper energy wheel operation and maintenance.

Construction Features And Accessories

Unit	
Unit Installation - Outdoor	Std
Unit Construction - Double Wall	Std
Insulation - 2 inch 2.48 R13 foam	Std
Corrosion Resistant Fasteners	Std
Hinged Access	Std
Factory Wired Non-Fused Disconnect Switch	
Direct Drive Plenum Blower & Motor Assemblies	Std
Factory Wired VFDs	Std
Unit Finish - Permatector, Concrete Gray (RAL 7023)	X
Stainless Steel Condensate Drain Pan and Connection	Std
Condensate Drain Trap	Std
Short Circuit Current - 5 kA	Std
Energy Recovery Device - Polymer Wheel w/ Silica Gel Desiccant	Std
Controls	
Unit Controls - Full Control	Std
Internally Mounted Control Center with 24 VAC control transformer(s) and control circuiting fusing	Std
BMS Protocol - BACnetIP	X
BMS Monitoring Points	
Supply Fan Control - Duct Static Pressure By Factory	X
Exhaust Fan Control - Space Static Pressure by Factory	X
Energy Wheel Economizer Control - Modulating Wheel w/VFD Wheel	X
Economizer Control - Temp./Enthalpy	X
Exhaust Fan Only Power	
Energy Wheel Rotation Sensor	X
Web-Based User Interface	Std
OutdrRec: Air Damper Ctrl - 100% OA-No Recirculation	X
Control Accessories	
Remote Display - w/10 ft cord	X
Dirty Filter Sensor(s) - All	X
Airflow Monitor	
Room Thermostat	
Phase/Brownout Protection	Std
Economizer Fault Detection Diagnostics	

Accessories	
Frost Control - Modulating Wheel	X
Outdoor Air Damper - Low Leakage	X
Return Air Damper - Low Leakage	X
Roof Curb - GKD - 48/176.1-G14	X
Supply Air Filters - 2" Merv 13, 4-20x20x2	X
Service Outlet - Shipped loose and powered by others	
Piping Vestibule	
Vapor-Tight Lights	
Condensate Overflow Switch	X
Spare Filters	
Exhaust Discharge Gravity Backdraft Damper	Std
ElectroFin Coil Coating	
Motor Shaft Grounding	
Energy Wheel Bypass Damper	
Return Air Filters - 2" Merv 8, 2-20x25x2	Std
Outdoor Air Filters - 2" Merv 8, 2-20x25x2	Std
Furnace Control - 18:1 Modulating	X
Spare Energy Wheel Belt	
Spare Energy Wheel Segments	
UV Lights	
Bipolar Ionization	
Power Venting	Std
Hail Guards	
Warranty Options	
Unit Warranty - 1 Yr (Standard)	Std
Energy Wheel Warranty - 5 Yrs Less Motor	Std
Furnace HX Warranty - 25 Yrs	Std
Compressor Warranty - 5 Yrs (4 Yrs Extended)	X
Furnace HX Warranty - 25 Yrs	Std

Standard Option: Std
Not Included:
Included: X

Notes
Outdoor Air Damper supplied is low leakage, motorized VCD-23 (leakage rate of 3 CFM / ft^2 @ 1 in. wg), Class 1A
Return Air Damper supplied is low leakage, motorized VCD-23 (leakage rate of 3 CFM / ft^2 @ 1 in. wg), Class 1A

Energy Recovery Summer Performance

Outdoor Air		Supply Air	
Dry Bulb (F)	95.0	Dry Bulb (F)	82.0
Wet Bulb (F)	78.0	Wet Bulb (F)	68.9
Specific Humidity (gr/lb)	119	Specific Humidity (gr/lb)	85
Enthalpy (BTU/lb)	41.5	Enthalpy (BTU/lb)	33.1
Exhaust Air		**Return Air**	
Dry Bulb (F)	87.9	Dry Bulb (F)	75.1
Wet Bulb (F)	72.8	Rel. Humidity (%)	49.8
Specific Humidity (gr/lb)	97	Specific Humidity (gr/lb)	95
Enthalpy (BTU/lb)	36.4	Enthalpy (BTU/lb)	28.2

Design Air Flow Conditions			
OA Volume (CFM)	ASHRAE 90.1 OA Enthalpy Recovery Ratio	EA Volume (CFM)	EA Wheel Effectiveness
2,900	63.4	2,900	62.5

Outdoor Air Cooling Reduction					
OA Load w/o Energy Recovery		OA Load with Energy Recovery		Equipment Reduction (tons)
(BTU/h)	(tons)	(BTU/h)	(tons)	
173,565.0	14.46	63,945.0	5.33	9.14

Energy Recovery Winter Performance

Outdoor Air		Supply Air	
Dry Bulb (F)	10.0	Dry Bulb (F)	48.7
Wet Bulb (F)	7.7	Wet Bulb (F)	40.9
Specific Humidity (gr/lb)	5	Specific Humidity (gr/lb)	26
Enthalpy (BTU/lb)	3.1	Enthalpy (BTU/lb)	15.7
Exhaust Air		**Return Air**	
Dry Bulb (F)	31.6	Dry Bulb (F)	72.0
Wet Bulb (F)	28.7	Rel. Humidity (%)	35
Specific Humidity (gr/lb)	19	Specific Humidity (gr/lb)	41
Enthalpy (BTU/lb)	10.4	Enthalpy (BTU/lb)	23.7

Design Air Flow Conditions			
OA Volume (CFM)	ASHRAE 90.1 OA Enthalpy Recovery Ratio	EA Volume (CFM)	EA Wheel Effectiveness
2,900	61.1	2,900	63.5

Outdoor Air Heating Reduction				
OA Load w/o Energy Recovery (BTU/h)	OA Load with Energy Recovery (BTU/h)	Equipment Reduction (BTU/h)	Sensible Effectiveness (%)	
194,184.0	72,976.0	121,208.0	65.3	

AHRI Performance Ratings

Energy Recovery Performance Rating in accordance with AHRI Standard 1060 (I-P)							
Rated Airflow (SCFM)		Net Supply Airflow (SCFM)	EATR (%)	OACF	Pressure Drop (in. wg)		Purge Angle (degrees)
Leaving Supply	Entering Exhaust				Supply	Exhaust	
2939	2939	2900	1.3	1.06	0.88	0.88	0

Thermal Effectiveness Ratings							
Enthalpy Recovery		Sensible Effectiveness		Latent Effectiveness		Total Effectiveness	
Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
63.4	61.1	65.3	65.3	61.4	61.4	62.5	63.5

Unit Corner Weights

Note
Estimated corner weights are shown looking down on unit and the outside air intake will be on the right. Weights are applied at the base of the unit. Images not drawn to scale.

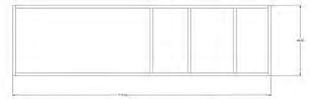
GKD Roof Curb

Model: GKD-48/176.1-G14

Curb Height (in.)	Curb Length (in.)	Curb Width (in.)	Material	Finish Type	Duct Adapter	Curb Weight (lb)
14	176.1	48	Galvanized	Galvanized	Yes	262

Standard Construction Features
All dimensions shown are actual and in units of in.'s.
If unit is selected with side or end discharge/return, there will not be bottom connections supplied with the curb.
14 gauge galvanized steel (perimeter channels).
14 gauge galvanized steel (interior channels).
Ships knocked down for field assembly.
Curb insulation to be provided by others.

Top View of Curb



Cross-Section View of Unit on Curb

Multi V Outdoor Unit Equipment Schedule - Air

Mark	Model Name	Type	Quantity	Total Capacity (BTU/h)		Corrected Capacity (BTU/h)		Corrected Power Input (kW)		Outdoor Temperature(°F)			Efficiency		Refrigerant	Piping Connections (inch)			Power Supply				Sound Power Level
				Total Cooling	Total Heating	Total Cooling	Total Heating	Cooling	Heating	Cooling DBT	Cooling WBT	Heating DBT	Cooling IEER (SEER)	Heating COP (HSPF)		Liquid	LP Gas	HP Gas	Volts	Phase	Hz	MCA (A)	MOP (A)	
ODU-1	ARUM264BTE5	HR_MULTI V 5	1	264000	297000	216611	281940	13.2	31.0	91.9	73.0	3.9	22.0	3.6	R410A	3/4	1+3/8	1+1/8	208~230V	3Ph	60Hz	28.5+53.6	110.0	86.0

Multi V Indoor Unit Equipment Schedule

Tag	Room Load (BTU/h)			Corrected Capa/Room Load (%)			Model Name	Type	Quantity	Nominal Capacity (BTU/h)			Corrected Capacity (BTU/h)			Room Design Temp.(Return Air Temp.)(°F)			Air flow rate(CFM)	Piping Connections (inch)		Power Supply			
Tag	Cooling	Sensible Cooling	Heating	Cooling	Sensible Cooling	Heating	Model Name	Type	Quantity	Total Cooling	Sensible Cooling	Heating	Total Cooling	Sensible Cooling	Heating	Cooling DBT	Cooling WBT	Heating DBT	Air flow rate(CFM)	Liquid	Gas	Volts	Phase	Hz	RLA (A)
VRFI-101	24000	23000	5500	109	98	632	ARNU283M3A4	DUCT HIGH STATIC	1	28000	22400	31500	26280	22562	34775	75.1	62.5	70.0	1250/1017/837	3/8	5/8	208~230V	1Ph	60Hz	2.5
VRFI-102	3700	3700	3200	282	218	425	ARNU123TRD4	CASSETTE 4WAY	1	12300	8900	13600	10452	8066	13600	75.1	62.5	70.0	307/283/247	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-201A	24000	20000	5100	96	89	607	ARNU303NJA4	VERTICAL AHU	1	30000	21600	34000	23251	17900	30996	75.1	62.5	70.0	879/802/629	3/8	5/8	208~230V	1Ph	60Hz	1.1
VRFI-201B	24000	20000	5100	96	89	607	ARNU303NJA4	VERTICAL AHU	1	30000	21600	34000	23251	17900	30996	75.1	62.5	70.0	879/802/629	3/8	5/8	208~230V	1Ph	60Hz	1.1
VRFI-202	13900	12900	7300	116	97	294	ARNU183TQD4	CASSETTE 4WAY	1	19100	13800	21500	16253	12568	21500	75.1	62.5	70.0	396/388/353	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-203	7100	7100	5000	147	123	272	ARNU123M1A4	DUCT MIDDLE STATIC	1	12300	9600	13600	10452	8769	13600	75.1	62.5	70.0	392/328/262	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-204	15600	11300	13500	67	71	100	ARNU123TUD4	CASSETTE 1WAY	1	12300	8900	13600	10452	8066	13600	75.1	62.5	70.0	353/325/290	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-205	6500	5400	1600	98	91	531	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-206	5400	4300	1300	118	115	653	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-207	5400	4300	1300	118	115	653	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-208	5400	4300	1300	118	115	653	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-209	4600	4200	1300	139	118	653	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-210	4500	4100	1300	142	120	653	ARNU073TRD4	CASSETTE 4WAY	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	265/247/212	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-211	4200	3900	700	152	127	1214	ARNU073TUD4	CASSETTE 1WAY	1	7500	5500	8500	6401	4960	8500	75.1	62.5	70.0	290/258/226	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-212	7600	7000	2000	107	90	544	ARNU093TRD4	CASSETTE 4WAY	1	9600	6900	10900	8151	6309	10900	75.1	62.5	70.0	283/265/251	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-213	8500	8200	2600	95	76	419	ARNU093TRD4	CASSETTE 4WAY	1	9600	6900	10900	8151	6309	10900	75.1	62.5	70.0	283/265/251	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-214	18500	18500	-	87	67	-	ARNU183TQD4	CASSETTE 4WAY	1	19100	13800	21500	16253	12568	21500	75.1	62.5	70.0	396/388/353	1/4	1/2	208~230V	1Ph	60Hz	0.2
VRFI-215	4600	3900	1500	139	127	566	ARNU073CEA4	FLOOR STANDING	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	300/265/230	1/4	1/2	208~230V	1Ph	60Hz	0.8
VRFI-216	5700	5400	2600	112	91	326	ARNU073CEA4	FLOOR STANDING	1	7500	5400	8500	6401	4960	8500	75.1	62.5	70.0	300/265/230	1/4	1/2	208~230V	1Ph	60Hz	0.8
VRFI-217	7100	7100	5000	147	123	272	ARNU123M1A4	DUCT MIDDLE STATIC	1	12300	9600	13600	10452	8769	13600	75.1	62.5	70.0	392/328/262	1/4	1/2	208~230V	1Ph	60Hz	0.2

Multi V HR Boxes

Tag	Model Name	Quantity	Power Supply			
			Volts	Phase	Hz	RLA
HR-1	PRHR043A	1	208 / 230V	1Ph	60Hz	0.2
HR-2	PRHR083A	1	208 / 230V	1Ph	60Hz	0.2
HR-3	PRHR083A	1	208 / 230V	1Ph	60Hz	0.2
HR-4	PRHR043A	1	208 / 230V	1Ph	60Hz	0.2

VRF NOTES

MULTI V INDOOR UNITS:
1. CRC wall controllers shall include BACnet MS/TP capability
2. Furnish AC Smart Touch Screen control panel with BACnet IP built in. Must be HTML based and have ability to directly connect to LG DOAS ERV for full control.
3. VRF Manufacturers Rep must provide Balancing for High static ducted units to properly set RPM limits for fan motors.

MULTI V OUTDOOR UNITS:
1. *EER/COP is based on Non-Ducted, AHRI 1230 Standard.
2. Outdoor unit must be elevated 12" off grade/roof.
3. Unit shall be capable of full heating corrected capacity as scheduled without exceeding the single point electrical MOP.
4. Manufacturers Rep must provide by-weekly site visits to support the contractor with proper installation support.

MULTI V HR BOX:
1. HR boxes shall not contain condensate drain or connection.

MW STUDIOS
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SEAL:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123
EXP DATE: 9-30-21

CONSULTANT:
DEDG
ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: HVAC SCHEDULES
SHEET NUMBER: M4.01

7/2/2021 3:28:36 PM

EXHAUST FAN SCHEDULE

Identity Mark	Manufacturer	Model	Description	External Static Pressure	AIRFLOW	Electrical				Motor Speed	Unit Weight	Type Comments
						Voltage	Frequency	Motor FLA	Phase			
EF-1	Greenheck	SQ-16-07-0700-VG	Direct Drive Mixed Flow Inline Fan	0.20 in-wg	4750 CFM	208 V	60 Hz	12.5 A	1	1700	182.00 lb	SEE NOTES BELOW.
EF-2	Greenheck	AER-E20C-610-VG	Sidewall Direct Drive Fan	0.25 in-wg	320 CFM	115 V	60 Hz	2.9 A	1	1100	143.00 lb	SEE NOTES BELOW.
EF-3	PLYMOVENT	TEV-585	Fume Extraction System Fan			208 V	60 Hz		3			NOT IN MECHANICAL PRIME SCOPE, FOR OWNER REFERENCE ONLY. 7.5 HP MOTOR BY OTHERS
EF-4	Greenheck	SE1-14-432-VG	Sidewall Direct Drive Fan	0.25 in-wg	1500 CFM	115 V	60 Hz	2.9 A	1	1725	75.00 lb	SEE NOTES BELOW.
KEF-1	Greenheck	CUE-090-VG	Direct Drive Upblast Centrifugal Roof Exhaust Fan	0.40 in-wg	300 CFM	115 V	60 Hz	1.4 A	1	1725	45.13 lb	SEE NOTES BELOW.

EF-1 NOTES:

Direct Drive Mixed Flow Inline Fan
Standard Construction Features:
Galvanized steel housing – Mixed flow aluminum wheel – Two bolted access panels – Slip-in duct connection flange – Ball bearing motors – Corrosion resistant fasteners
Selected Options & Accessories:
Motor - Vari-Green EC motor
Control - 0 to 10VDC (from CO/NO2/Temp controller)
Standard mounting – horizontal airflow motor above mounting plate
UL/cUL 705 Listed - "Power Ventilators"
Junction Box Mounted and Wired
Aluminum Wheel Material
Isolators, Spring, Hanging, 1 Inch (Qty 4, (PN: 450134))
Unit Warranty: 1 Yr (Standard)

EF-2 NOTES:

Sidewall Direct Drive Fan
Standard Construction Features:
- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Cast aluminum airfoil blade propeller - Ball bearing motors - Corrosion resistant
fasteners
Selected Options & Accessories:
Motor - Vari-Green EC motor
Control - Dial for balancing
Airflow Direction: Exhaust
Damper Mounted, WD-320-PB-22X22, Gravity Operated, Not Coated
Short Wall Hsg, Flush Exterior, w/ OSHA Grd.
Hi-Pro Polyester Finish on Fan/Damper: Color by Arch
Motor Access: From Int. of Bldg.

KEF-1 NOTES:

Direct Drive Upblast Centrifugal Roof Exhaust Fan
Standard Construction Features:
- Aluminum housing - Backward curved composite (sizes 60-95) or aluminum
(sizes 99-300) wheel - Aluminum curb cap with prepunched mounting holes -
Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve
bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners
Selected Options & Accessories:
Motor - Vari-Green EC motor
Control - Dial for balancing
Standard Curb Cap Size - 19 in. Square GPI-19-G12
UL/cUL 705 Listed - "Power Ventilators"
Junction Box Mounted & Wired
Hinge, Factory Installed
Foam Curb Seal (Factory Applied)
Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated
Birdscreen: Aluminum, nom. 86% Free Area
Composite Wheel Material

EF-4 NOTES:

Sidewall Direct Drive Fan
Standard Construction Features:
- Fan panels of galvanized steel - Aluminum blade propeller - Die formed,
galvanized steel drive frame assembly - Corrosion resistant fasteners
Selected Options & Accessories:
Motor - Vari-Green EC motor
Control - Vari-Green Indoor Air Quality - Temperature & Humidity
Control - Dial for balancing
Control - Vari-Green Transformer 85-277VAC to 24 VDC, Mounted & Wired
Airflow Direction: Exhaust
Damper Mounted, BD-320-PB-16X16, Gravity Operated, Not Coated
Short Wall Hsg, Flush Exterior, w/ OSHA Grd.
Hi-Pro Polyester Finish on Fan/Damper: Color by Arch
Motor Access: From Int. of Bldg.
Switch, NEMA-3R, Toggle, Shipped with Unit
Unit Warranty: 1 Yr (Standard)

LOUVER SCHEDULE

Identity Mark	Application	Manufacturer (Basis of Design)	Model	Dimensions			Airflow (CFM)	Free Area (FT2)	Pressure Drop (In. W.C.)	Free Area Velocity (FPM)	Finish	Notes
				Width (Inch)	Height (Inch)	Depth (Inch)						
LV-EF1	VENTILATION	GREENHECK	EAD-601	30	66	6	4750	42.3	0.07	723	BY ARCH	SEE NOTES BELOW.
LV-EF4	VENTILATION	GREENHECK	EAD-601	34	24	6	1500	1.88	0.09	793	BY ARCH	SEE NOTES BELOW.

LV-EF1 PRODUCT DETAILS
Frame: 6 in. x 0.081 in. Frame Thickness
Frame Type: Channel
Blades: 0.081 in. Adjustable Blade Thickness
Material: Aluminum
Sizing: Nominal
Blade Seal: Yes
Jamb Seal: Yes
Axle Bearings: Synthetic
Axle Material: Steel
Shape: Rectangular
Construction: Mechanically Fastened
OPTIONS & ACCESSORIES
Finish: Painted
Finish Performance: AAMA 2605
Coating Type: 2Ci 70%Kynar/100%Fluoropolymer
Color: Color by Architect
Bird Screen: 0.75 in. x 0.05 in., Flat Expanded Aluminum, Internal,Mill Finish
Mounting: Clip Angles
Actuator: 120 VAC, Mounting: In Airstream, Failure Pos.:Closed, Location: Left Bottom, Operating Mode: Two Position, Nema Enclo

LV-EF4 PRODUCT DETAILS
Frame: 6 in. x 0.081 in. Frame Thickness
Frame Type: Channel
Blades: 0.081 in. Adjustable Blade Thickness
Material: Aluminum
Sizing: Nominal
Blade Seal: Yes
Jamb Seal: Yes
Axle Bearings: Synthetic
Axle Material: Steel
Shape: Rectangular
Construction: Mechanically Fastened
OPTIONS & ACCESSORIES
Finish: Painted
Finish Performance: AAMA 2605
Coating Type: 2Ci 70%Kynar/100%Fluoropolymer
Color: Color by Architect
Bird Screen: 0.75 in. x 0.05 in., Flat Expanded Aluminum, Internal,Mill Finish
Mounting: Clip Angles
Actuator: 120 VAC, Mounting: In Airstream, Failure Pos.:Closed, Location: Left Bottom, Operating Mode: Two Position, Nema Enclo - Wired to Varigreen Controller to open when EF-4 is operating

RANGE HOOD SCHEDULE

Identity Mark	Count	Manufacturer	Model	Max Amps	CFM	Fan Type	V/PH/HZ	Type Comments
RH-1	1	Greenheck / Accurex	GRRS-W-36-T-G-O-X	15	300	In-Line Duct Fan	120/1/60	SEE NOTES BELOW.

NOTES:
1. PROVIDE CONTROLLED GAS SOLENOID VALVE.
2. PROVIDE MANUAL PULL STATION KIT.
3. PROVIDE HANDICAPPED ACCESSIBLE CONTROL BOX.
4. SEE 11/M6.01 FOR HOOKUP DETAIL

ELECTRIC UNIT HEATER SCHEDULE

ID	MANUFACTURER	MODEL NO.	Total Heating Capacity	VOLT	PH	FREQUENCY	Design Total Power	REMARKS
EUH-1	Marley Engineered Products	MWUH5004	8553 Btu/h	208 V	1	60 Hz	2500 W	ELECTRIC UNIT HEATER W/CEILING MOUNTING BRACKET AND INTEGRAL T-STAT

GAS-FIRED BOILER SCHEDULE

	ID	DESCRIPTION	MANUFACTURER	MODEL NO.	QTY	GAS-FIRED HEAT EXCHANGER								THERMAL EFF 80degF-180 degF	ELECTRICAL				UNIT WEIGHT	Comments
						GAS BURNER			WATERSIDE											
						INPUT	INPUT @ MIN FIRE	OUTPUT	FUEL TYPE	FUEL PRESS AVAIL	EWT	LWT	MAX TEMP RISE	PD @ 100GPM	VOLT	PH	FREQ	FLA		
	B-1A	Brute Series Hydronic Boiler	Bradford White	BNTH399NXN2	1	399900 Btu/h	80000 Btu/h	386000 Btu/h	Natural	0.4 psi	180 °F	100 °F	60 °F	0.0 ftH2O	97%	120 V	1	60 Hz	4.0 A	364 lb	w/MOUNTED BOILER RECIRC PUMP
	B-1B	Brute Series Hydronic Boiler	Bradford White	BNTH399NXN2	1	399900 Btu/h	80000 Btu/h	386000 Btu/h	Natural	0.4 psi	180 °F	100 °F	60 °F	0.0 ftH2O	97%	120 V	1	60 Hz	4.0 A	364 lb	w/MOUNTED BOILER RECIRC PUMP

PUMP SCHEDULE

ID	MANUFACTURER	MODEL NO.	PUMP			MOTOR					REMARKS
			TYPE	FLOW DESIGN	HEAD	POWER	ECM	VOLT	PH	FREQ	
P-1A	Grundfos	MAGNA3 40-120 GF	INLINE CIRCULATOR	50.0 GPM	10.0 FT	0.64 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
P-1B	Grundfos	MAGNA3 40-120 GF	INLINE CIRCULATOR	50.0 GPM	10.0 FT	0.64 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
P-2	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	14.0 GPM	5.0 FT	0.61 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
P-3	Grundfos	MAGNA3 40-120 GF	INLINE CIRCULATOR	15.0 GPM	10.0 FT	0.19 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER - CONTRACTOR TO CONFIRM SIZE OF PUMP WITH SNOW MELT VENDOR
RP-1	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	11.5 GPM	11.1 FT	0.19 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
RP-2	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	2.4 GPM	16.9 FT	0.19 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
RP-3	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	1.0 GPM	5.0 FT	0.64 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
RP-4	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	4.2 GPM	16.5 FT	0.19 W	Yes	115 V	1	60 Hz	HEATING LOOP 140 DEG F WATER
RP-5	Grundfos	MAGNA3 32-100 GF	INLINE CIRCULATOR	15.0 GPM	20.0 FT	0.19 W	Yes	115 V	1	60 Hz	SNOW MELT LOOP 100 DEG F 30%PG - CONTRACTOR TO CONFIRM SIZE OF PUMP WITH SNOW MELT VENDOR

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

	ID	DESCRIPTION	MFG	MODEL	MATERIAL	FINISH	QTY	NOTES
	RG1	EGGCRATE RETURN GRILLE	Titus	50F	ALUMINUM	WHITE ENAMEL	4	
	RG2	PERFORATED RETURN GRILLE WITH RECTANGULAR NECK	Titus	PAR-AA	ALUMINUM	WHITE ENAMEL	7	
	RG3	EGGCRATE RETURN GRILLE	Titus	50F	ALUMINUM	WHITE ENAMEL	11	
	RG4	EGGCRATE RETURN GRILLE	Titus	50F	ALUMINUM	BLACK ENAMEL	5	
	SD1	PERFORATED DIFFUSER WITH DEFLECTORS	Titus	PAS-AA	ALUMINUM	WHITE ENAMEL	8	
	SG1	LOUVERED DOUBLE DEFLECTION GRILLE	Titus	300FS	ALUMINUM	WHITE ENAMEL	13	
	SG2	LOUVERED DOUBLE DEFLECTION GRILLE	Titus	300FL	ALUMINUM	BLACK ENAMEL	9	
	SG4	LOUVERED DOUBLE DEFLECTION GRILLE	Titus	300FS	ALUMINUM	BLACK ENAMEL	1	
	SPRG-1	Direct spiral duct mounted double deflection supply grille with radius end cap, 3/4" spacing with front blades parallel to long dimension	Titus	S8F	ALUMINUM	CLEAR ANODIZED	1	
	SPSG1	Direct spiral duct mounted double deflection supply grille with radius end cap, 3/4" spacing with front blades parallel to long dimension	Titus	S300FL	ALUMINUM	CLEAR ANODIZED	4	W/ ASD DAMPER
	TG1	Steel door return grille with sight-proof blades parallel to long dimension	Titus	T-700L	STEEL	WHITE ENAMEL	1	

AIR COMPRESSOR SCHEDULE

Unit Tags	Manufacturer	Model	Compressor Performance				Electrical Data					Notes
			PSI	CFM	HP	STAGES	RPM	Volts	Phase	Freq Hz	Weight lb	
EQ5	ARCTIC	E4-10-A6	6000	14	10	4	1400	208	3	60	700	w/REAL TIME CO MONITOR, LOW OIL LEVEL SHUTDOWN

CONTAINMENT FILL STATION SCHEDULE

Model	PSI	#FILL POSITIONS	#CASCADE INLETS	Weight lb	Notes
C-FS3C55	6000	3	4	830	w/CASCADE CONTROL PANEL & AIR HOSE TO COMPRESSOR

PLATE & FRAME HEAT EXCHANGER SCHEDULE

	ID	MANUFACTURER	MODEL NO.	PRIMARY FLUID					SECONDARY FLUID				HEATING PLANT		REMARKS
				HEATING CAP	DESIGN FLOW	EWT	LWT	PD	DESIGN FLOW	EWT	LWT	PD	TYPE	GLYCOL %	
	HTX-1	ALFA LAVAL	CB30-24H	200000 Btu/h	13.3 GPM	160 °F	130 °F	10.0 ftH2O	20.0 GPM	120 °F	100 °F	10.0 ftH2O	PG	40	CONTRACTOR TO CONFIRM SIZE OF HTX WITH SNOW MELT VENDOR

CEILING FAN SCHEDULE

	ID	MANUFACTURER	MODEL NO.	QTY	MATERIAL	FINISH	FAN			UNIT WEIGHT	POWER	VOLT	PH	FREQ	REMARKS
							AIRFLOW DESIGN	MAX RPM	BLADE DIA						
	CF-1	BigAssFans	MK-I61-05	2	ALUMINUM	BY ARCHITECT	9676 CFM	170	60"	34 lb	35 W	120 V	1	60 Hz	W/12" DOWNROD, POWERED WALL MOUNT CONTROLLER

SINGLE ZONE VRF SCHEDULE

Mark	Model	Capacity		Electrical Data				Mechanical Data	Identity Data		Comments
		Cooling Capacity (Btu/h)	Heating Capacity (Btu/h)	Power Input (Cooling)(W)	Power Input (Heating)(W)	Power Supply (Ph, V, Hz)	Running Current (A)	Air Flow Rate (H/M/L)(CFM)	Type	Refriger ant Type	
VRFSZ-1/ODUSZ-1	LCN188HV4 (INDOOR) / LUU189HV (OUTDOOR)	7,700 ~ 18,000 ~ 24,800	6,500 ~ 18,500 ~ 23,400	540~1440~2600	500~1950~2600	1, 208-230, 60	15.1	460 / 424 / 388	Single Zone Four-Way Ceiling Cassette	R410A	Indoor Unit Powered from Outdoor Unit. Return air temperature control (no wall thermostat)
VRFSZ-2/ODUSZ-2	LCN188HV4 (INDOOR) / LUU189HV (OUTDOOR)	7,700 ~ 18,000 ~ 24,800	6,500 ~ 18,500 ~ 23,400	540~1440~2600	500~1950~2600	1, 208-230, 60	15.1	460 / 424 / 388	Single Zone Four-Way Ceiling Cassette	R410A	Indoor Unit Powered from Outdoor Unit. Return air temperature control (no wall thermostat)
VRFSZ-3/ODUSZ-3	LCN188HV4 (INDOOR) / LUU189HV (OUTDOOR)	7,700 ~ 18,000 ~ 24,800	6,500 ~ 18,500 ~ 23,400	540~1440~2600	500~1950~2600	1, 208-230, 60	15.1	460 / 424 / 388	Single Zone Four-Way Ceiling Cassette	R410A	Indoor Unit Powered from Outdoor Unit. Return air temperature control (no wall thermostat)

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SEAL:
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SCOTT A. FRENCK
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PE084123

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EXP DATE: 9-30-21

CONSULTANT:
DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
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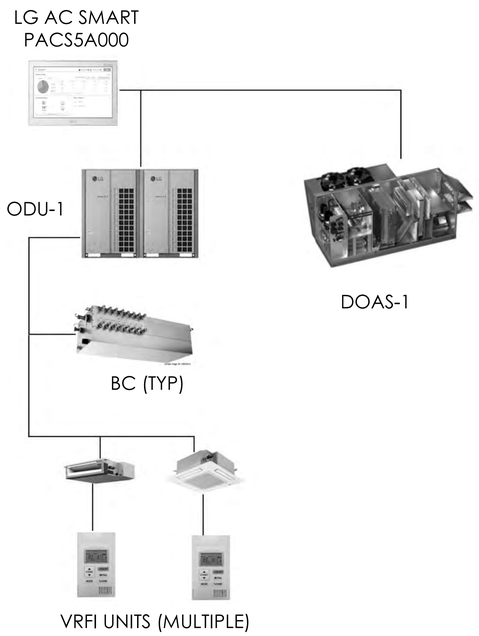


DOAS-1

DOAS unit is to be provided with on-board controllers to perform the sequence below.

Run Conditions - CONTINUOUS:
24/7/365 Operation required to provide Code required ventilation and exhaust to/from building

The LG AC Smart provides the following functions with the DOAS:
a. Adjust discharge air temperature set point
b. Schedule unit on/off or occupied/unoccupied
c. Reports alarms
d. DOAS unit shall be interlocked to the AC Smart via the native Modbus communication.

FACTORY CONTROLLER: Controller shall be provided with required sensors and programming for rooftop unit. Controller shall be factory programmed, mounted and tested. Controller shall have a LCD readout for changing set points and monitoring unit operation.

UNIT START COMMAND (Unit will be enabled to start once a jumper is placed between R to G):
• Factory mounted and wired outdoor air damper actuator is powered
• Return air damper actuator is powered.
• Exhaust fan starts after a (adj.) delay.
• Supply fan starts after a (adj.) delay.
• Tempering options and energy wheel option to function as described below.

UNIT STOP COMMAND (OR DE-ENERGIZED):
• Supply fan, exhaust fan, energy wheel and tempering options de-energized.
• Outdoor air damper actuator is spring return close.
• Return air damper is spring return close.

OCCUPIED/UNOCCUPIED MODES: Shall be based on a 7-day time clock in the LG AC Smart. The schedule shall be set by the end user.

Occupied Mode:
• Damper control per below.
• Energy wheel control per below.
• Exhaust fan ON.
• Supply fan ON.
• Heating per below.
• Cooling per below.

Unoccupied Mode (Unit Off): Unit remains off when in unoccupied mode.
• Supply fan OFF
• Exhaust fan OFF
• Tempering OFF
• Outdoor air damper closed.
• Return damper closed.

MORNING WARMUP/COOL DOWN: Prior to occupancy, the unit will run using the warmup or cool down sequence until the occupied set point is achieved. The heating or cooling mode must not be locked out and the space temperature is below or above set point by the unoccupied hysteresis (adj.) (This Sequence must be field configured.)

SUPPLY BLOWER SEQUENCE: The supply blower is provided with a factory mounted variable frequency drive. The supply blower speed will be controlled with the following sequence.
Duct Static Pressure Sensor: The supply blower is modulated based upon the signal from a duct static pressure sensor (factory provided and wired, field mounted and tubing by others). The controller will modulate the supply fan based upon a comparison of the duct static pressure set point (adj.) to the actual duct static pressure level reported from the sensor.

EXHAUST BLOWER SEQUENCE: The exhaust blower is provided with a factory mounted variable frequency drive. The exhaust blower speed will be controlled with the following sequence.
Space Pressure by Factory: The exhaust blower is modulated based upon the signal from a building pressure sensor. The controller will modulate the exhaust fan based upon a comparison of the building static pressure set point (adj.) and the building static pressure level reported from the sensor.

COOLING SEQUENCE: The cooling is controlled to maintain the supply temperature set point. The mechanical cooling will be locked out when the outside air is < 55 F (adj.).
Packaged DX Cooling (Digital Scroll): The controller will provide a modulating signal for cooling. From 10-50%, the digital scroll will be controlled to maintain discharge temperature. From 50-100% the second stage will be on in combination with the digital scroll compressor to maintain the discharge temperature.
Modulating Hot Gas Reheat Sequence: During dehumidification the modulating HGRH is controlled to maintain the supply temperature set point.
Modulating Head Pressure Control: Lead condenser fan will have an EC motor and will modulate to maintain a head pressure set point.

DEHUMIDIFICATION CONTROL SEQUENCE: The cooling is controlled to maintain the cooling-coil set point. The dehumidification sequence will be locked out when the OA is < 10 F(adj.) above the cold-coil set point (adj.).
Cold Coil Set Point Control: The controller will control the cooling to maintain a cold coil set point. The active set point will set to local control (55 F, adj.) from the factory and can be field adjusted locally or by the BMS.

REHEAT SEQUENCE: While the unit is in dehumidification mode the outdoor air will be reheated via Modulating Hot Gas Reheat for space neutral applications.
Modulating Hot Gas Reheat: The controller will modulate the hot gas reheat reheat valve with a 0-10 V signal to maintain the supply temperature set point (adj.).

HEATING SEQUENCE: The heating is controlled to maintain the supply temperature set point. The heating will be locked out when the outside air is > 80 F (adj.).
Indirect Gas Furnace: The controller will modulate the indirect gas furnace to maintain the supply temperature set point (adj.).

TEMPERATURE CONTROL SEQUENCE: The controller adjust the supply air temperature based on an Outside Air Temperature Reset Function. Heating mode temperature (OA below 55 F) will be 70 F, cooling mode temperature (OA above 65 F) will be 55 F. For OA temps between 55 F and 65 F, the supply air setpoint will vary on a linear scale.

BUILDING FREEZE PROTECTION: If the supply air temperature drops below 35 F (adj.) for 300s (adj.), the controller will de-energize the unit and activate the alarm output.

TEMPERATURE PROTECTION: The controller will enable the supply fan to modulate down to help the unit keep up with heating demand in the event of wheel failure or the unit operating outside design conditions. (This
can be enabled under the manufacturer menu in the controller)

ENERGY WHEEL FROST CONTROL: Frost control for the energy wheel is enabled when frost is present on the wheel; based on the outside air temperature and the pressure drop across the wheel. If the outdoor air temperature is below 5 F adj. and the differential pressure across the wheel is about 1.5", adj. frost control will enable.
Wheel VFD (Modulate Wheel): When frosting is occurring, the VFD modulates the wheel down to a slow rotational speed to defrost wheel. Once either the pressure drop decreases below the pressure switch set point, or the outdoor air temperature increases about the temperature set point, the unit will resume normal operation.

ECONOMIZER SEQUENCE: When the application requires cooling, and the outdoor air conditions are suitable for free cooling, the controller will modulate the energy wheel speed to maintain the discharge temperature setpoint. If the energy wheel modulates to the economizer set point and the discharge temperature is not met, the controller will increase the call for cooling to meet the discharge temperature and could engage mechanicalcooling.
Temp./Enthalpy: The economizer will be locked out when: the outdoor air is < 40 F DB (adj.) or > 75 F DB (adj.) or > 55 F dew point (adj.) ; the unit is operating in dehumidification mode; or there is a call for heating

ENERGY WHEEL SEQUENCE
Modulate Wheel (100% OA only): When economizer mode is enabled and there is a signal for cooling, the wheel VFD modulates wheel speed to maintain the discharge temperature set point.

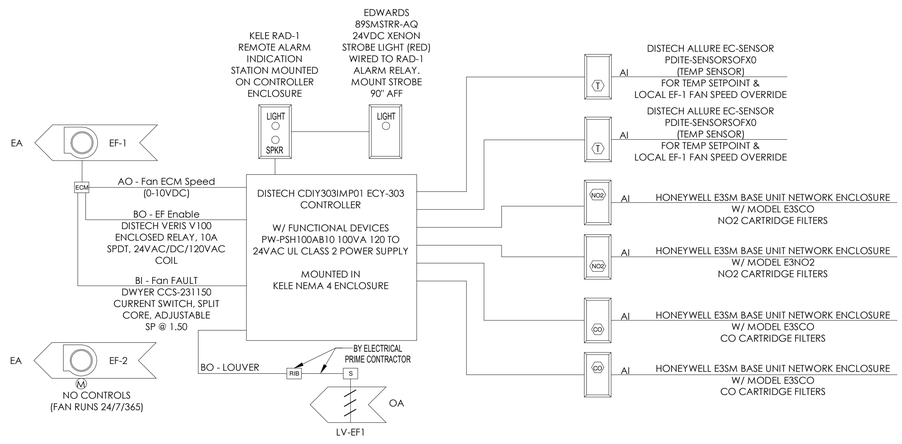
ALARMS INDICATION: The controller will display alarms and have one digital output for remote indication of an alarm condition to the LG AC Smart. Possible alarms include:
Building Management System: The controller will send all alarms to the BMS.
Dirty Filter Alarm: A digital signal is sent to the controller indicating an increased pressure drop across the outdoor, exhaust, or supply air filters (Must be adjusted in field during start up). The controller will then provide a dirty filter alarm.
Dirty Wheel Alarm: The controller monitors pressure across the wheel and sends an alarm in the case of an increased pressure drop.
Wheel Rotation Alarm: The controller monitors wheel rotation, if the wheel does not rotate for a set period of time (adj.) an alarm will generate.
Supply and Exhaust Air Alarm: The controller monitors the proving switch on each blower and sends an alarm in the case of either blower proving switch not engaging.
DX Alarm: The controller monitors the refrigerant pressure. In the case of low refrigerant pressure the compressors will shut down until refrigerant pressure returns to normal values and the controller will send an alarm. In the case of high refrigerant pressure the compressors will shut down, requiring a manual reset and the controller will send a alarm.
Temperature Sensor Alarm: The controller sends an alarm in the case of a failed air temperature sensor.
Pressure Sensor Alarm: The controller sends an alarm in the case of a failed pressure sensor.
Humidity Sensor Alarm: The controller sends an alarm in the case of a failed humidity sensor.

ACCESSORIES: The following accessories will be included with the unit to expand the functionality or usability of the controller.
BMS Interfacing: A BMS port or serial card is provided with the controller for field interfacing with a building management system. Each card is sent out with the default parameters, and the controls contractor must change the appropriate addresses to match the BMS settings.
DDC Remote Interface: Factory provided, field mounted interface panel that will be wired to the main controller for monitoring and remote adjustments of set points.
Phase and Brownout Protection: Factory mounted and wired component which monitors the main power coming into the unit. If a phase drops out, or if the incoming voltage exceeds the acceptable range, the component will turn off the unit to help protect the electrical systems.
Condensate Overflow Unit Shutdown: Factory mounted condensate overflow switch wired to the unit controller. The controller monitors the condensate overflow switch. If the water level in the drain pan reaches a certain level, the unit will shutdown and send an alarm.
120V/24V Photoelectric Smoke Detector: Duct smoke detectors are shipped loose for field mounting and wiring in the supply and exhaust air ducts. Each duct smoke detector contains 2 normally open and 2 normally closed contracts for alarm notification. (To disable unit based off smoke detection smoke detectors contacts must be field wired between R and G)

VRFI

Indoor Unit Sequence of Operations:
A. On/Off Control: the indoor units can be commanded ON/OFF either by a schedule in the Central Controller, or at the Remote Controller. If all indoor units are off, the outdoor unit shall turn off. With the Night Setback Function/Mode, the system shall cycle on during unoccupied periods as needed to maintain unoccupied temperature set point.
B. Space Temperature Control: the indoor unit shall modulate its internal linear expansion valve (LEV) to maintain the temperature set point via the indoor unit's internal controls.
1. The set point is adjustable at the remote controller, or central controller. The temperature set point can also be scheduled at the remote controller or the central controller.
C. Mode Control:
1. Auto Mode:
a. The indoor unit shall determine whether it should be in auto-heat mode or auto-cool mode based on space temperature relative to temperature set point. If the indoor unit is in auto heat mode, the indoor unit control board shall follow the heat mode sequence. If the indoor unit is in auto cool mode, the indoor unit control board shall follow the cool mode sequence.
b. The indoor unit shall switch from AutoHeat to AutoCool when the space temperature rises above and remains above the temperature set point plus the dead band for 3 minutes.
c. The indoor unit will switch from AutoCool to AutoHeat when the space temperature drops below and remains below the temperature set point minus the dead band for 3 minutes.
2. Heating Mode: the indoor unit shall modulate its linear expansion valve (LEV) to maintain temperature set point.
3. Cooling Mode: the indoor unit shall modulate its linear expansion valve (LEV) to maintain temperature set point.
D. Fan/Vane Control: fan speed and vane direction (if applicable) shall be adjustable by the user at the remote controller and/or the central controller.

1 HVAC SEQUENCES OF OPERATION



Exhaust Fan EF-1 & EF-2 Normal Operation Mode

NOTE:

CONTRACTOR REPSONSIBLE FOR PROVIDING THIS SYSTEM (w/PROGRAMMING) OR APPROVED EQUIVALENT TO CONTROL EF-1 ECM MOTOR

Run Conditions:

EF 1: On alarm or rise in temperature.
EF 2: Continuous (24/7/365) - no Controls required

Cooling Operation:

Upon an increase in zone temperature above cooling setpoint (set at either local temperature sentor) the fan speed shall be increased from minimum to maximum speed based on zone temperature range

EF-1 Fan Speed Override:

User to be able to temporarily override the EF-1 fan speed at either temperature sensor. Override will revert to automatic control after 15 minutes (adj)

Exhaust Fan (EF-1) Emergency Mode - Nitrogen Dioxide / Carbon Monoxide

Run Conditions - The exhaust fan speed will increase to maximum on sensing of High Nitrogen Dioxide and/or Carbon Monoxide levels:

CO 25ppm (adj), NO2 1ppm (adj)

Alarms shall be provided as follows:
- High Zone Carbon Monoxide: If the zone carbon monoxide is greater than 40ppm (adj)
- High Zone Nitrogen Dioxide: If the zone nitrogen dioxide is greater than 4 ppm (adj)

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

LV-EF1 Operation Mode

Run Conditions - Interlocked

The louver will open via signal from the controller to the LV-EF1 RIB whenever EF-1 is running.

2 SEQUENCE OF OPERATIONS - APPARATUS BAY EXHAUST FANS EF-1 & EF-2

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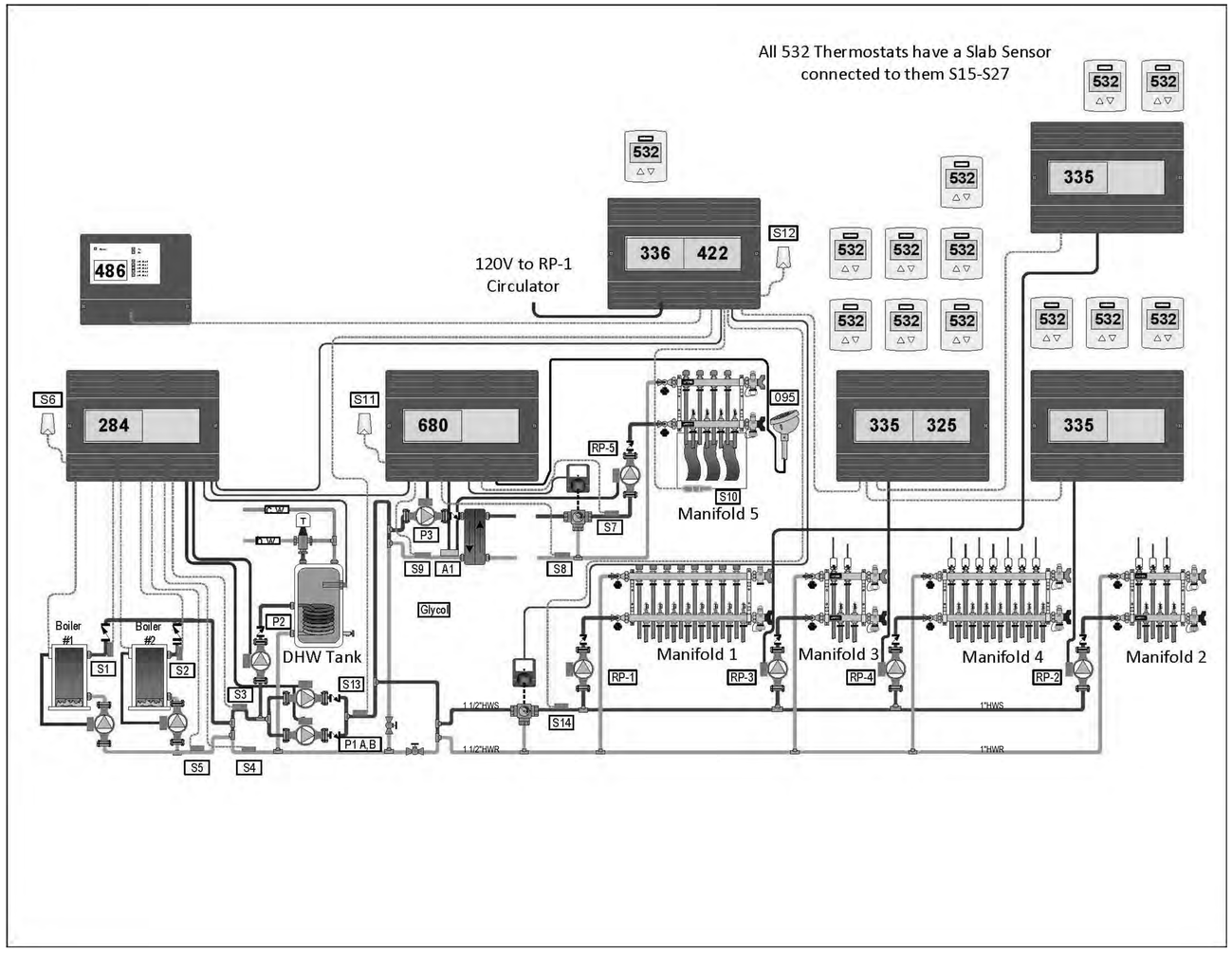

SEQUENCE AND OPERATION OF THE RADIANT HEATING SYSTEM AND SNOWMELT SYSTEM

NOTE: MECHANICAL PRIME CONTRACTOR IS REPSONSIBLE FOR PROVIDING ALL EQUIPMENT, CONTROLS, SENSORS, CONTROL/NETWORK WIRING (PER SPECIFICATIONS SECTIONS 260519 AND 260533.13), PROGRAMMING TO CREATE A FULLY OPERATIONAL SYSTEM. 120VAC WIRING BY ELECTRICAL PRIME CONTRACTOR.

THE RADIANT HEATING SYSTEM CONSISTS OF 13 ZONES AND 4 MANIFOLDS. EACH MANIFOLD USES A SINGLE CIRCULATOR. MANIFOLD-1 HAS 8 LOOPS AND HEATS THE LARGE BAY AREA. A SINGLE 532 TEKMAR THERMOSTAT IS USED TO CONTROL THE ROOM TEMPERATURE. EACH 532 THERMOSTAT HAS 4 WIRES CONNECTED TO IT AS WELL AS 2 WIRES FOR A 691 FLOOR SENSOR. THE REMAINING 3 MANIFOLDS HAVE 2-7 LOOPS AND EACH LOOP IS A SEPARATE ZONE. EVERY MANIFOLD LOOP HAS A POWER HEAD MOUNTED ON THE MANIFOLD. THE POWER HEADS ARE OPENED AS NEEDED BY A TEKMAR 532 THERMOSTAT WITH A SLAB SENSOR CONNECTED. THE 532 THERMOSTATS ARE CONNECTED TO TEKMAR WIRING CENTERS ALSO REFERRED TO AS ZONE MANAGERS. THE MANIFOLD ZONE POWER HEADS ARE ALSO CONNECTED AND POWERED BY THE WIRING CENTERS. WHEN ONE OF THE 532 THERMOSTATS CALLS FOR HEAT A POWER HEAD OPENS AND THEN THE CIRCULATOR TURNS ON AFTER A TIME DELAY. NO END SWITCHES ON THE POWER HEADS ARE REQUIRED.

THE RADIANT HEATING SYSTEM SHALL BE SUPPLIED WITH A SINGLE WATER TEMPERATURE BASED ON THE FEEDBACK FROM THE 532 THERMOSTATS AS WELL AS THE 070 OUTSIDE TEMPERATURE. THE THERMOSTATS AND ZONE WIRING CENTERS COMMUNICATE THROUGH A TN4 AND C TERMINAL FROM EACH THERMOSTAT THAT ARE DAISY CHAINED TOGETHER FROM ALL OF THE WIRING CENTERS. (WHEN CONNECTING THE TN4 AND C TERMINALS BE CAREFUL OF THE TN4 POLARITY.) THE WATER TEMPERATURE FOR THE RADIANT HEATING SYSTEM IS CONTROLLED BY A TEKMAR 422 MIXING CONTROL AND A 3 WAY VALVE. THE 422 CONTROL HAS AN 070 OUTDOOR SENSOR INSTALLED AND WILL MODULATE THE WATER TEMPERATURE BASED ON OUTSIDE TEMPERATURE AND FEEDBACK FROM THE INDIVIDUAL ROOM TEMPERATURES. THE 422 CONTROL HAS A SENSOR ATTACHED TO THE MIXED RADIANT WATER AS WELL AS A BOILER SUPPLY SENSOR. WHEN AN INCREASE IN TEMPERATURE IS REQUIRED, THE 422 SENDS A HEAT DEMAND TO THE 284 BOILER STAGING CONTROL.

THE 284 BOILER CONTROL HAS THE ABILITY FOR MONITORING THROUGH BAC NET (FUTURE). THE 284 CONTROL WILL OPERATE THE P1A/B SYSTEM PUMP (LEAD/LAG/ROTATE PUMP) AS WELL AS CONTROL THE P2 DOMESTIC HOT WATER PUMP WHEN THE INDIRECT WATER HEATER HAS A DEMAND FOR HEATING THE TANK. THERE ALSO WILL BE SET-POINT DEMAND FROM THE 680 SNOWMELT CONTROL WHEN HEAT IS REQUIRED AS WELL AS A HEAT DEMAND FROM THE 422 RADIANT HEATING SYSTEM. THE 284 HAS AN 070 OUTDOOR SENSOR AND WILL BE PROGRAMMED WITH A BOILER OUTDOOR RESET CURVE AS WELL AS SET-POINT TEMPERATURES FOR THE SNOWMELT AND DOMESTIC WATER. BASED ON THE REQUIRED WATER TEMP A 0-10 OR 4-20 SIGNAL WILL BE SENT TO THE TWO CONDENSING BOILERS TO CONTROL THE BOILER OUTLET TEMPERATURE. IF MORE THAN ONE DEMAND SIGNAL IS INITIATED THE HIGHEST TEMPERATURE TARGET DEMAND WILL BE TARGETED BY THE BOILERS. THE 284 CONTROL WILL ALSO STAGE AND ROTATE THE BOILERS. THE 284 CONTROL HAS SENSORS TO MONITOR THE BOILER OUTLET TEMPERATURES AS WELL AS THE BOILER INLET TEMPERATURE AND SENSORS TO MONITOR THE SYSTEM SUPPLY AND RETURN TEMPERATURES.

A TEKMAR 486 GATEWAY WILL ALLOW THE ROOM TEMPERATURES TO BE CHANGED OR MONITORED FROM ANY IPAD, SMART PHONE OR COMPUTER. THE GATEWAY WILL NOT INTERFACE WITH THE 284 BOILER CONTROL OR THE 680 SNOWMELT CONTROL.

THE 680 SNOWMELT CONTROL IS A BAC NET CAPABLE CONTROL. IT HAS AN OUTSIDE TEMPERATURE SENSOR FOR WARM WEATHER SHUTDOWN AND WILL USE A 095 SNOW CUP THAT WILL SENSE SNOW AND INITIATE THE START OF THE SNOWMELT SYSTEM. A TEKMAR 079 SLAB SENSOR MUST BE FIELD INSTALLED (DRILL SIDE OF SW CORNER 2x2 PAVER AND INSERT IT INTO THE HOLE) TO MONITOR THE COURTYARD SNOW MELT SURFACE TEMPERATURE. THE 680 CONTROL WILL OPERATE A 3-WAY VALVE TO CONTROL THE SNOWMELT WATER TEMPERATURE. THE SNOWMELT SYSTEM USES A BRAZED PLATE HEAT EXCHANGER TO ISOLATE THE GLYCOL FILLED SYSTEM FROM THE REST OF THE BUILDING. THERE ARE 2 CIRCULATORS ON THE SNOW MELT SYSTEM. ONE CIRCULATOR TO FEED BRAZED PLATE AND ONE TO SUPPLY THE MANIFOLD (RP-5) AFTER THE 3 WAY MIXING VALVE. THERE ARE 3 SENSORS TO MONITOR THE WATER TEMPERATURES. ONE SENSOR IS ON THE MIXED SUPPLY WATER AND ONE SENSOR IS ON THE SNOWMELT RETURN TO THE BRAZED PLATE HEAT EXCHANGER. THE THIRD SENSOR IS ON THE RETURN BOILER SIDE OF THE BRAZED PLATE HEAT EXCHANGER. ALL OF THESE PUMPS AND SENSORS ARE WIRED TO THE TEKMAR 680. TEKMAR ALSO REQUIRES THE INSTALLATION OF A AQUASTAT THAT SHALL TURN OFF RP-5 IF THE RETURN WATER TO THE BOILERS GETS TOO COLD. WHEN THE SNOWMELT SYSTEM REQUIRES HEAT, A SET-POINT DEMAND IS SENT TO THE 284 BOILER CONTROL TO START THE BOILERS.

1 HVAC SEQUENCES OF OPERATION: HEATING HOT WATER / RADIANT / SNOW MELT

NOT TO SCALE

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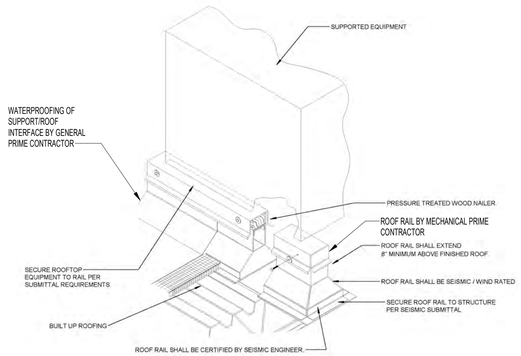

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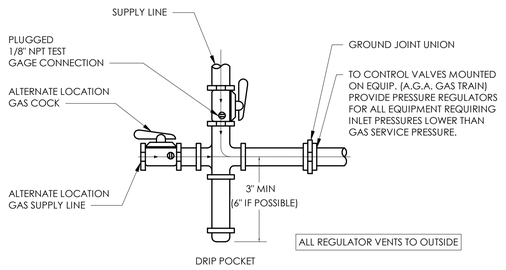

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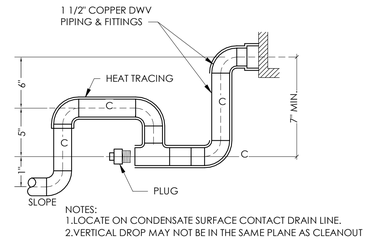

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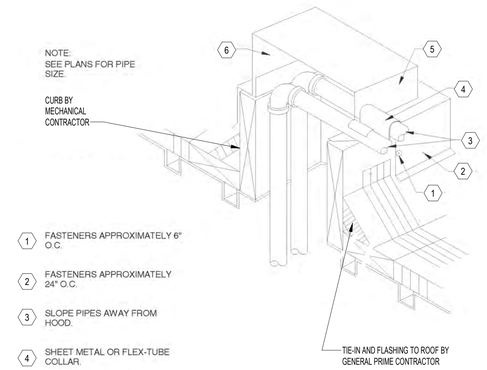

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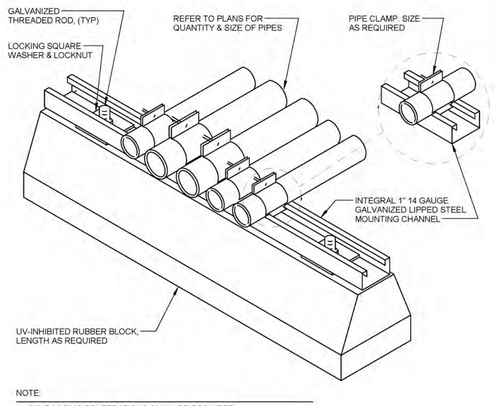
FOR COORDINATION BETWEEN PRIME CONTRACTORS



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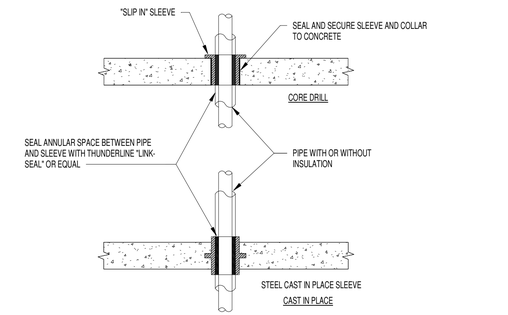

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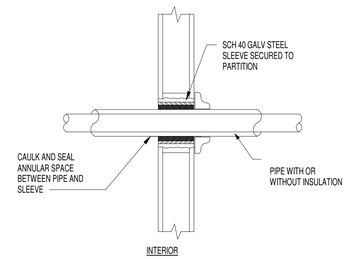
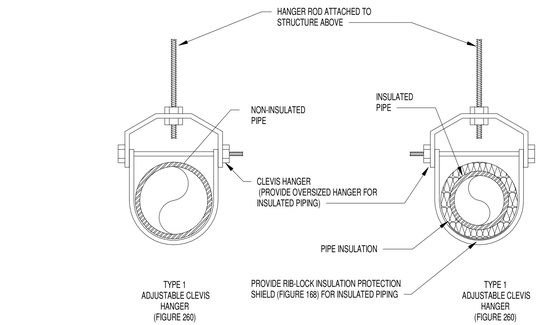
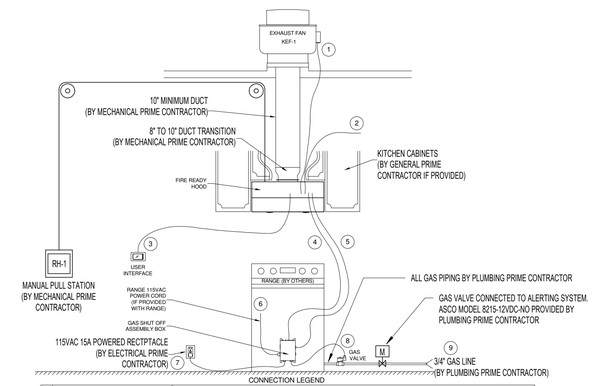


7 PIPE PENETRATION THRU INTERIOR WALLS
NOT TO SCALE

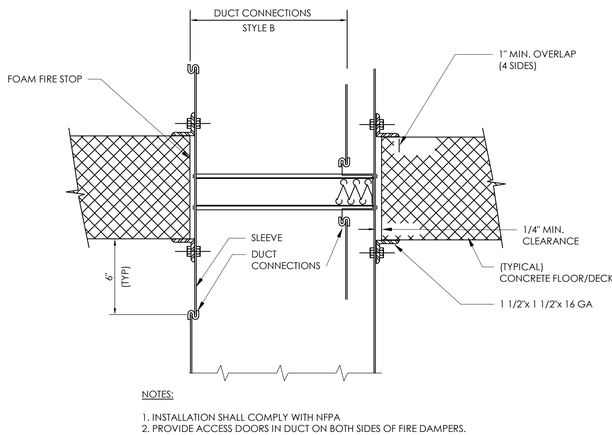


8 SINGLE PIPE CLEVIS HANGER
NOT TO SCALE

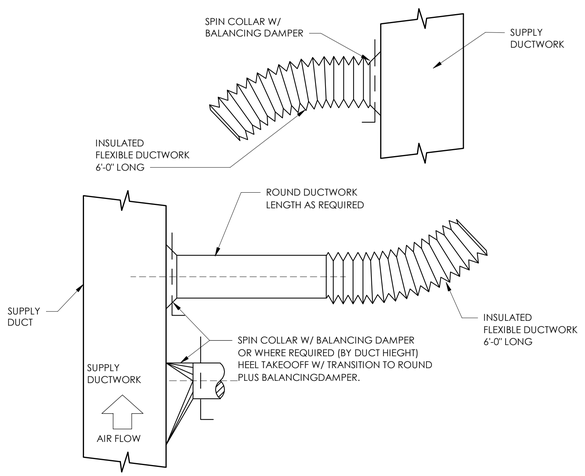


ID	ITEM	ITEM DETAILS
1	FAN	FIELD TO CONNECT FAN KEF-1 TO QC2, PROVIDED WITH 0-10VDC SPEED REFERENCE AND 115VAC RUN COMMAND.
2	HOOD POWER	FIELD TO PROVIDE 115VAC POWER FROM 15A BREAKER TO TERMINAL BLOCKS H1 AND N1 INSIDE HOOD (GROUND TO GROUNDING TERMINAL).
3	SHIP LOOSE USER INTERFACE	8.5 FT PLUG AN PLAY CABLE WITH LIGHT BLUE LABEL COILED UP AND ATTACHED TO HOOD. FIELD TO CONNECT PLUG TO BACK OF USER INTERFACE INSIDE INTERFACE J-BOX.
4	GAS/ELECTRIC DISCONNECT CABLE 1	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 9PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
5	GAS/ELECTRIC DISCONNECT CABLE 2	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 4PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
6	RANGE POWER CORD	PLUG RANGE POWER CORD (IF PROVIDED WITH RANGE) INTO GAS SHUT OFF ASSEMBLY BOX.
7	SHUT OFF ASSEMBLY BOX POWER	PLUG GAS SHUT OFF ASSEMBLY BOX POWER CORD INTO NEARBY 115VAC RECEPTACLE.
8	SHUT OFF ASSEMBLY VALVE POWER	GAS VALVE TO CONNECT TO QUICK CONNECTOR, CONNECTS 5FT GAS VALVE POWER CORD TO 1.5FT CABLE ON GAS VALVE.
9	GAS LINE	PIPE GAS LINE INTO GAS VALVE INLET, THEN OUT OF GAS VALVE OUTLET TO RANGE.

9 DETAIL - KITCHEN HOOD/KEF-1 HOOKUP
NOT TO SCALE



10 DETAIL - FIRE DAMPER HORIZONTAL INSTALLATION
NOT TO SCALE



11 DETAIL - FLEXIBLE DUCT
NOT TO SCALE

MANNS WOODWARD STUDIOS
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SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: HVAC DETAILS

SHEET NUMBER: M6.01

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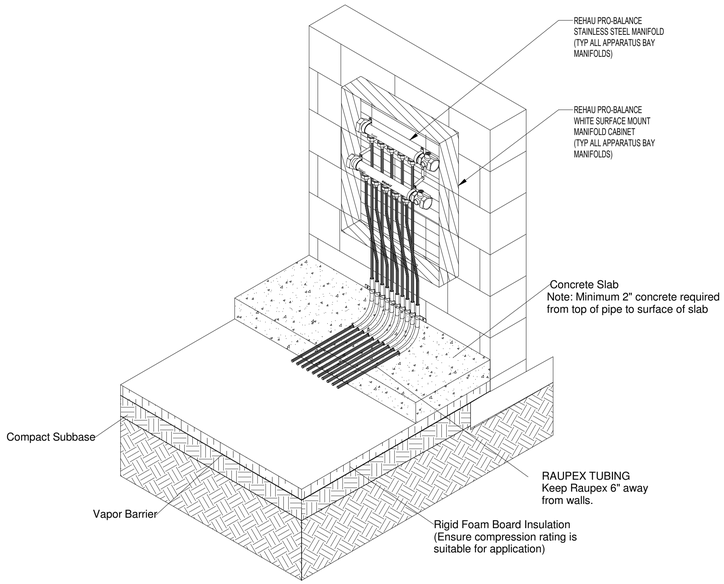
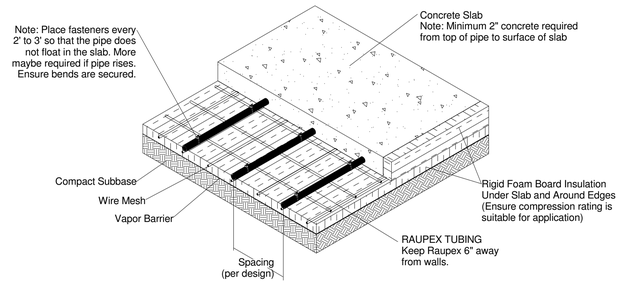
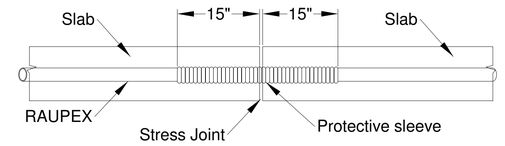


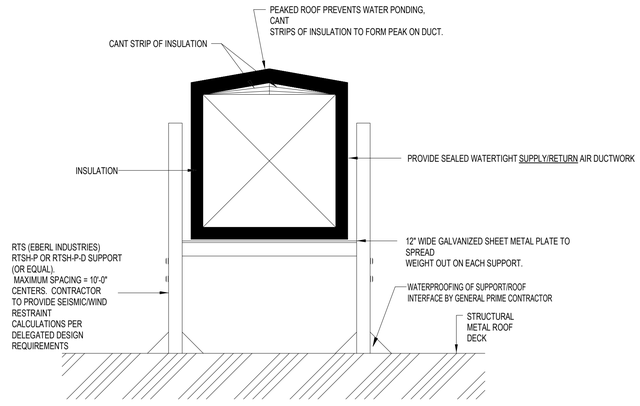
1 DETAIL - RADIANT MANIFOLD CABINET
NOT TO SCALE



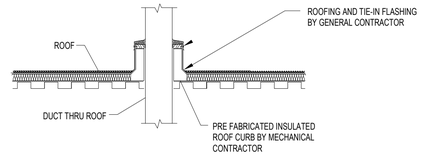
2 DETAIL - RADIANT PIPING SLAB ON-GRADE INSTALLATION
NOT TO SCALE



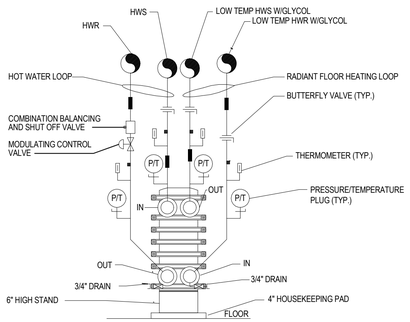
3 DETAIL - RADIANT PIPING EXPANSION JOINT
NOT TO SCALE



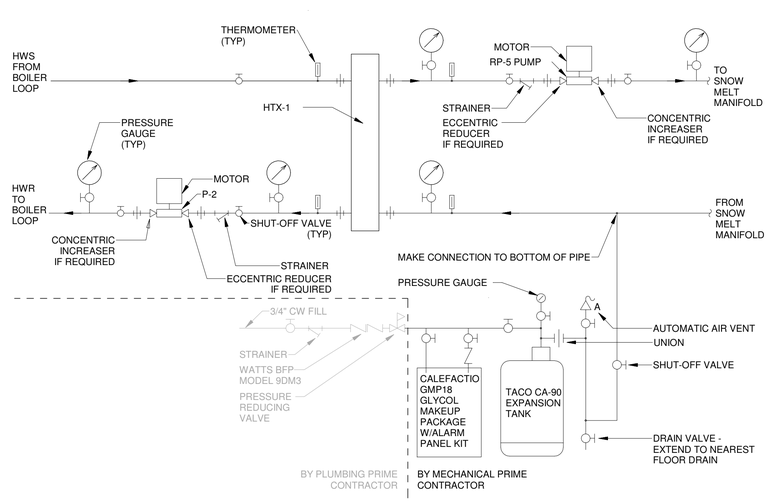
4 DUCT SUPPORT ON ROOF
NOT TO SCALE



5 DUCT THROUGH ROOF
NOT TO SCALE



6 RADIANT SNOW MELT HEAT EXCHANGER PIPING
NOT TO SCALE



7 DETAIL - SNOW MELT GLYCOL FEEDER PIPING
NOT TO SCALE

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123

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CONSULTANT:
DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: HVAC DETAILS
SHEET NUMBER: M6.02

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GENERAL MECHANICAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room / 1 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -10' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- PIPING BEING DEMOLISHED

FIRE PROTECTION SYMBOLS

- FP-D — FIRE PROTECTION DRY
- FP-O — FIRE PROTECTION OTHER
- FP-PA — FIRE PROTECTION PRE-ACTION
- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- UPRIGHT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD
- RECESSED SPRINKLER HEAD
- CONCEALED SPRINKLER HEAD
- 'D' REPRESENTS DRY SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
- 48x18 S/A — OBSTRUCTION FROM DUCTWORK 48" AND GREATER

ABBREVIATIONS

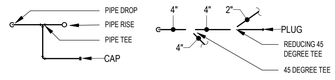
Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	AREA DRAIN
AD	ACCESS DOOR
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
E/A	EXHAUST AIR
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FD	FIRE DAMPER
FDV	FIRE DEPARTMENT VALVE
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MUA	MAKE-UP/AIR
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	DUCT RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
RL/A	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
S/A	SUPPLY AIR
SAN	SANITARY
SF	SQUARE FOOT
SD	SMOKE DAMPER
SM	SURFACE MOUNT
SP	STANDPIPE
SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
V	VENT
VAV	VARIABLE AIR VOLUME
VENT	VENTILATION
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WCO	WALL CLEAN OUT
WH	WALL HYDRANT

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

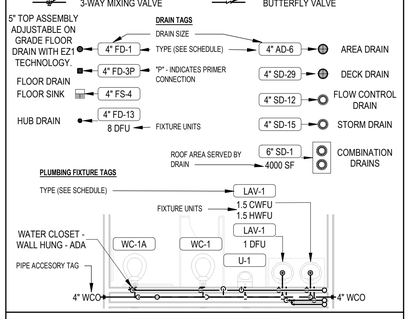
PLUMBING AND PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- NG — NATURAL GAS
- PG — PROPANE GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN
- CWV — COMBINATION WASTE & VENT
- CA — COMPRESSED AIR
- CW — DOMESTIC COLD WATER
- H-CW — HARD COLD WATER
- S-CW — SOFT COLD WATER
- F-CW — FILTERED COLD WATER
- RO — REVERSE OSMOSIS WATER
- HW — HOT WATER
- HW 140° — HOT WATER 140°
- HW-R — HOT WATER RECIRCULATION
- HW-R 140°- — HOT WATER RECIRCULATION 140°
- GV — GREASE VENT
- GW — GREASE WASTE
- IW — INDIRECT WASTE
- OV — OIL VENT
- OW — OIL WASTE
- PD — PUMP DISCHARGE
- V — SANITARY VENT
- SS — SANITARY SEWER
- SHWR — SOLAR HOT WATER RETURN
- SHWS — SOLAR HOT WATER SUPPLY
- SD — STORM DRAINAGE
- OSD — OVERFLOW STORM DRAINAGE



PIPE ACCESSORY TAGS

- 2" DOM. WM — DOMESTIC WATER METER
- 2" BALANCING — BALANCING VALVE
- 2" SHUTOFF — 1/4 TURN BALL VALVE
- 2" CHECK — CHECK VALVE
- 2" TMV — 3-WAY MIXING VALVE
- 2" M-CNTRL — MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL — 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV — PRESSURE REDUCING VALVE
- 3/8" SOLENOID — REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY — BUTTERFLY VALVE



EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLING CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
CH	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CONDENSER WATER PUMP
CHWP	CHILLED WATER PUMP
DBP	DOMESTIC WATER BOOSTER PUMP
DC	DUCT MOUNTED COIL
DCP	DOMESTIC WATER CIRCULATING PUMP
EF	EXHAUST FAN
EDC	ELECTRIC DUCT COIL
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FCU	FAN COIL UNIT
FP	FIRE PUMP
GI	GREASE INTERCEPTOR
GRV	GRAVITY ROOF VENTILATOR
HWP	HEATING WATER PUMP
HX	HEAT EXCHANGER
HRU	HEAT RECOVERY UNIT
PRV	POWER ROOF VENTILATOR
RE	RETURN/EXHAUST FAN
RTU	ROOFTOP UNIT
SEP	SEWAGE EJECTOR PUMP
SF	SUPPLY FAN
SP	SUMP PUMP
UH	UNIT HEATER
WH	WATER HEATER

PROJECT GENERAL NOTES

- IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, DRAWINGS AND OTHER CONTRACT DOCUMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO ORDERING OR PROVIDING ANY MATERIALS OR LABOR. THE CONTRACTOR SHALL BID THE MOST STRINGENT REQUIREMENTS.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING DURING ALL STAGES OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES. INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL PLUMBING CODE.
- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- LOCATE PIPING AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT AND PLUMBING FIXTURES.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

PLUMBING GENERAL NOTES

- FIELD VERIFY ALL NEW WATER, WASTE, AND VENT PIPING CONNECTIONS AND PROVIDE NEW CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.
- PITCH UNDERFLOOR SANITARY WASTE AND STORM PIPING 3" AND GREATER AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE. PITCH ALL OTHER WASTE PIPING AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
- ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY SEWER, AND STORM SEWER SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR SHALL BE 2" MINIMUM.
- PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.
- ALL INDOOR EXPOSED INSULATED PIPING TO BE JACKETED WITH WHITE PVC. SEE SPECIFICATIONS.
- PVC/CPVC/ABS PIPING SHALL NOT BE INSTALLED IN ENVIRONMENTAL AIR PLENUMS UNLESS IT HAS A 25/50 FLAME/SMOKE RATING OR IS INSULATED AND THE INSULATION HAS A 25/50 FLAME/SMOKE RATING.

PLUMBING SHEET INDEX

SEISMIC & WIND REQUIREMENTS FOR MECHANICAL / PLUMBING SYSTEMS IBC / ASCE-7

THIS FIRE STATION IS ASSIGNED TO SEISMIC DESIGN CATEGORY C AND IS OCCUPANCY / RISK CATEGORY IV AS DEFINED BY CHAPTER 1 OF ASCE-7. ALL HVAC, PLUMBING & FIRE PROTECTION SYSTEMS AND EQUIPMENT ARE REQUIRED FOR THE CONTINUED OPERATION OF THE FIRE STATION AFTER AN EARTHQUAKE AND SHALL BE ASSIGNED A COMPONENT IMPORTANCE FACTOR OF 1.5 IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7.

A. PER SECTION 301.15 OF THE INTERNATIONAL MECHANICAL CODE, MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TORESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY.

B. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.

C. FOR ALL COMPONENTS REQUIRING SEISMIC AND/OR WIND RESTRAINT, THE MECHANICAL / PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS PREPARED IN ACCORDANCE WITH THE IBC AND ASCE 7 BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA WHO IS QUALIFIED TO DESIGN SEISMIC RESTRAINT SYSTEMS. SHOP DRAWINGS SHALL INCLUDE SEPARATE DETAILS AND CALCULATIONS FOR EACH SEPARATE SYSTEM, DEVICE, OR ELEMENT. THE APPROVAL OF SEISMIC BRACING SHOP DRAWINGS SHALL BE REQUIRED PRIOR TO THE INSTALLATION OF ANY BUILDING SYSTEMS OR COMPONENTS.

D. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.

E. SEISMIC RESTRAINTS FOR PIPING AND DUCTWORK MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED		RESTRAIN ALL - SEISMIC & WIND	-
FLOOR MOUNTED		RESTRAIN ALL	-
WALL MOUNTED		RESTRAIN ALL	-
COMPONENT SUPPORTS		RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	-
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>2"	4
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 2" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4
DUCTWORK		6 SQ.FT. AND LARGER	5
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 6)		REQUIRED	6

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, T HEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

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SEAL:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT A. FRENCK — ENGINEER — PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: PLUMBING TITLE SHEET

SHEET NUMBER: P0.00

7/2/2021 3:48:43 PM

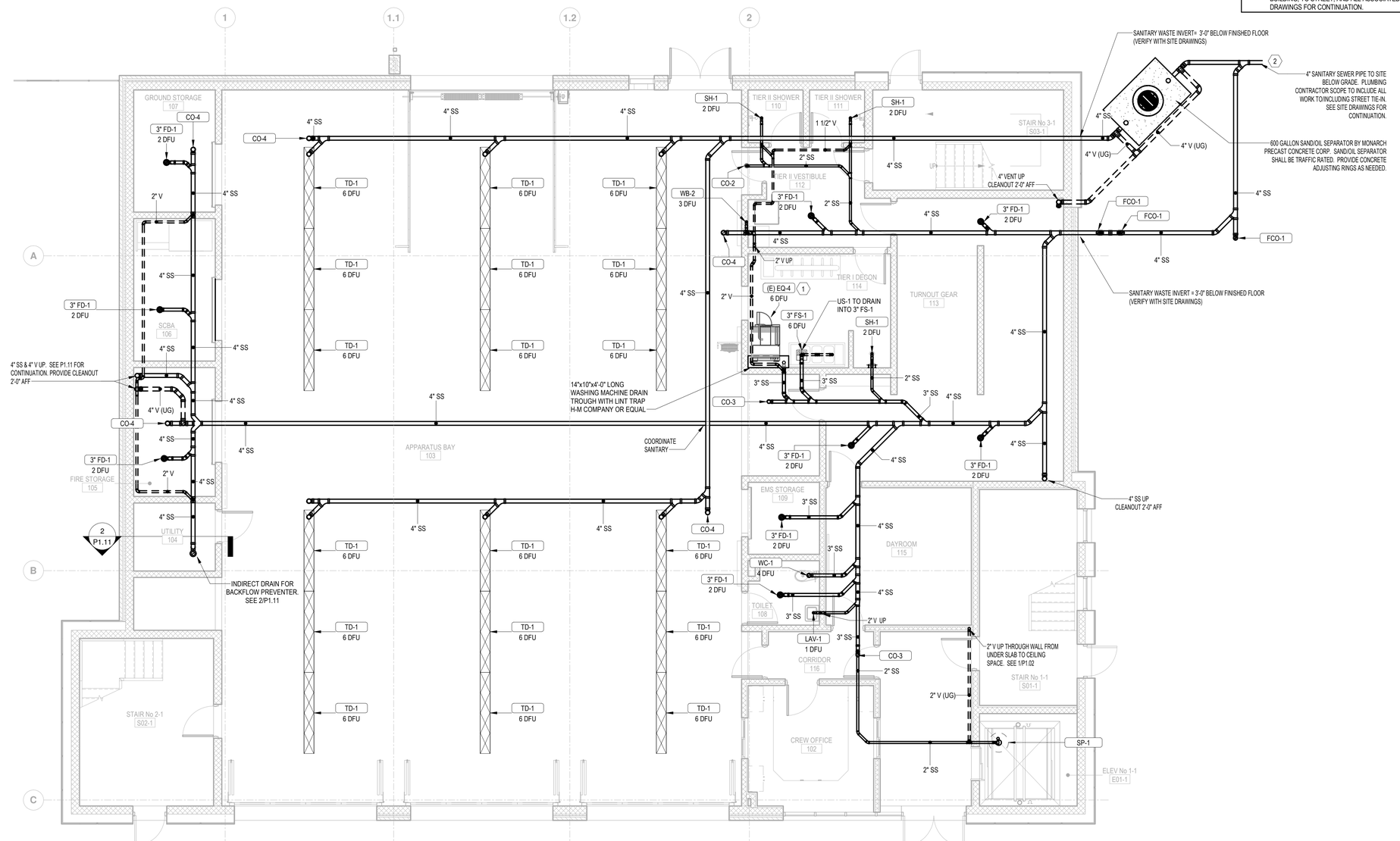
SANITARY PLUMBING GENERAL NOTES

1. PROVIDE WALL CLEANOUTS FOR ALL SANITARY RISERS AT 2'-0" ABOVE FINISHED FLOOR FOR ALL LEVELS.
2. ALL SANITARY WASTE PIPING SHOWN BENEATH FINISHED FLOOR UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
3. ALL SANITARY VENT PIPING SHOWN IN CEILING SPACE OR AS CLOSE TO DECK AS POSSIBLE UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
4. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.

KEYNOTES

1 PLUMBING CONTRACTOR SHALL RELOCATE (E) EXTRACTOR FROM BASEMENT OF EXISTING FIRE HOUSE TO TIER 1 DECON 114. DRAIN EXTRACTOR TO DRAIN TROUGH

2 PLUMBING PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SANITARY PIPING WORK OUT OF BUILDING, TO STREET, AND ALL ASSOCIATED WORK FOR TIE-IN TO SANITARY MAIN. SEE CIVIL SITE DRAWINGS FOR CONTINUATION.



1 FIRST FLOOR - SANITARY - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

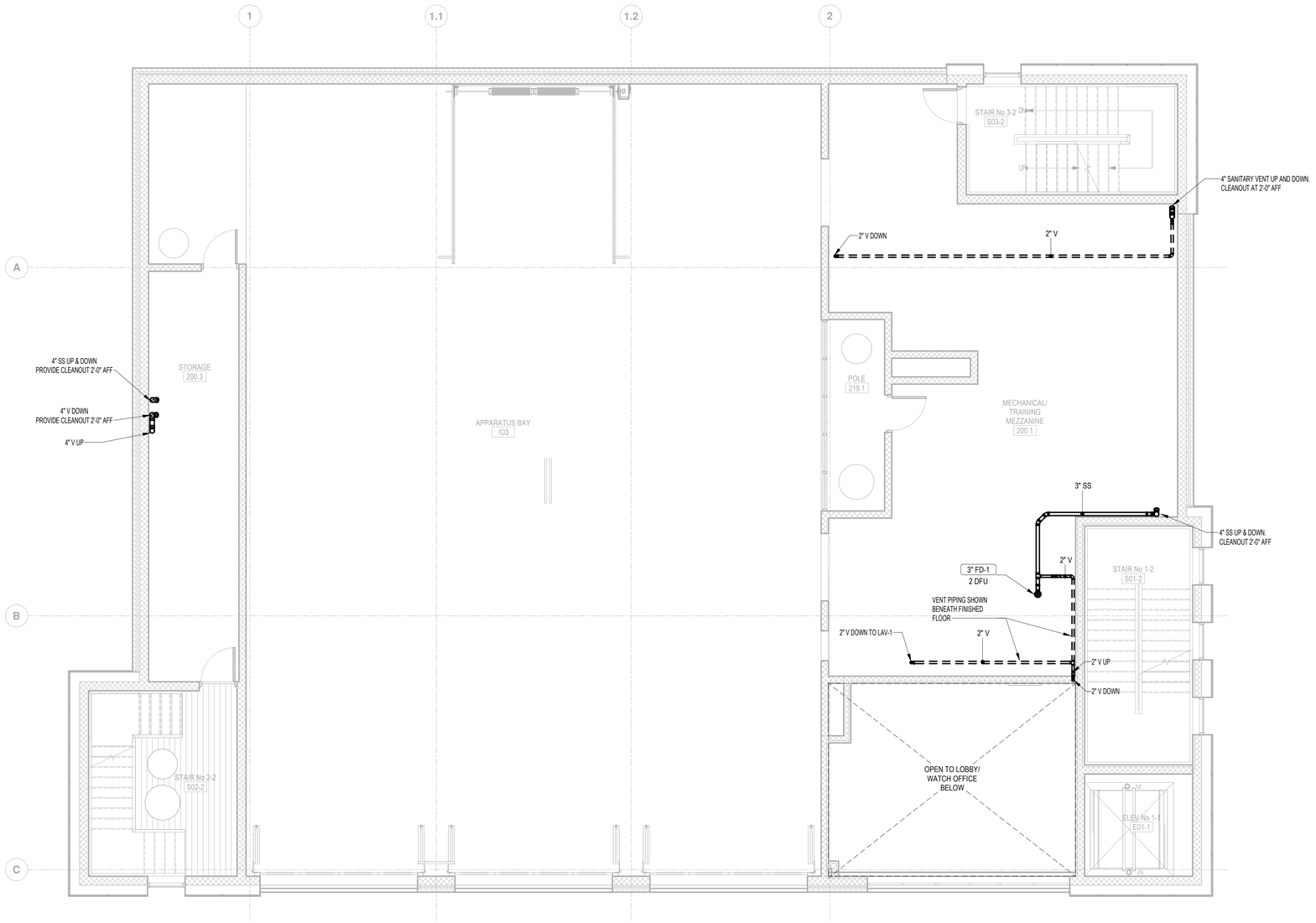
DRAWING TITLE: FIRST FLOOR SANITARY PLAN

SHEET NUMBER: P1.01

7/2/2021 3:48:50 PM

SANITARY PLUMBING GENERAL NOTES

1. PROVIDE WALL CLEANOUTS FOR ALL SANITARY RISERS AT 2'-0" ABOVE FINISHED FLOOR FOR ALL LEVELS.
2. ALL SANITARY WASTE PIPING SHOWN BENEATH FINISHED FLOOR UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
3. ALL SANITARY VENT PIPING SHOWN IN CEILING SPACE OR AS CLOSE TO DECK AS POSSIBLE UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
4. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.



1 MEZZANINE - SANITARY - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

P T

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ENGINEER
PE084123

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CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE SANITARY PLAN

SHEET NUMBER: P1.02

7/2/2021 3:48:53 PM

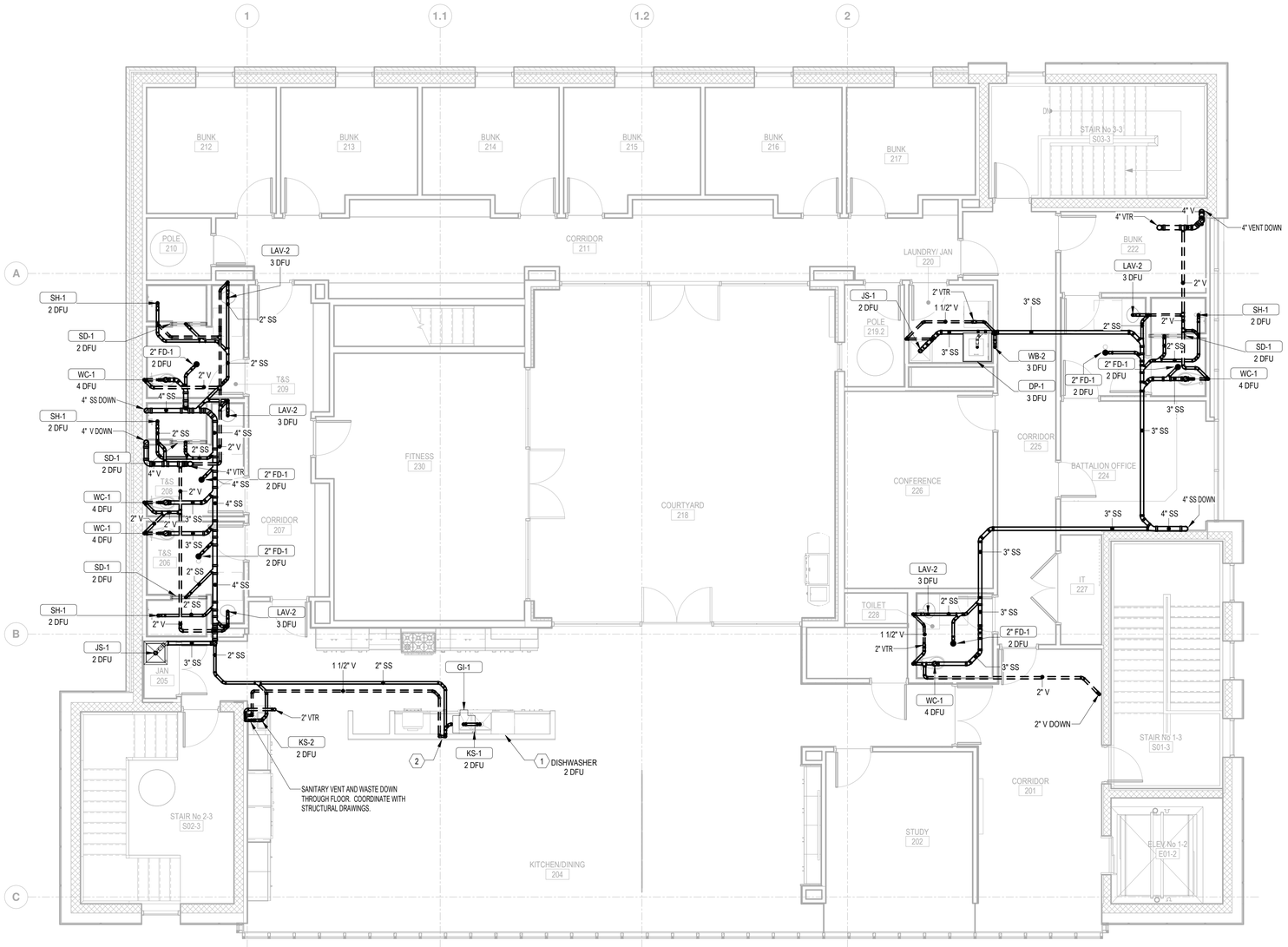
SANITARY PLUMBING GENERAL NOTES

1. PROVIDE WALL CLEANOUTS FOR ALL SANITARY RISERS AT 2'-0" ABOVE FINISHED FLOOR FOR ALL LEVELS.
2. ALL SANITARY WASTE PIPING SHOWN BENEATH FINISHED FLOOR UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
3. ALL SANITARY VENT PIPING SHOWN IN CEILING SPACE OR AS CLOSE TO DECK AS POSSIBLE UNLESS OTHERWISE STATED ON DRAWINGS. INSTALL WITH SLOPE PER LOCAL CODE.
4. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.

KEYNOTES

1 UNDERCOUNTER DISHWASHER SHALL DRAIN TO KITCHEN SINK SANITARY PIPING DOWNSTREAM OF GREASE INTERCEPTOR. SEE 9/P6.03 FOR DETAIL.

2 ISLAND VENT. SEE 8/P6.03 FOR DETAIL



1 SECOND FLOOR - SANITARY - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

P T

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

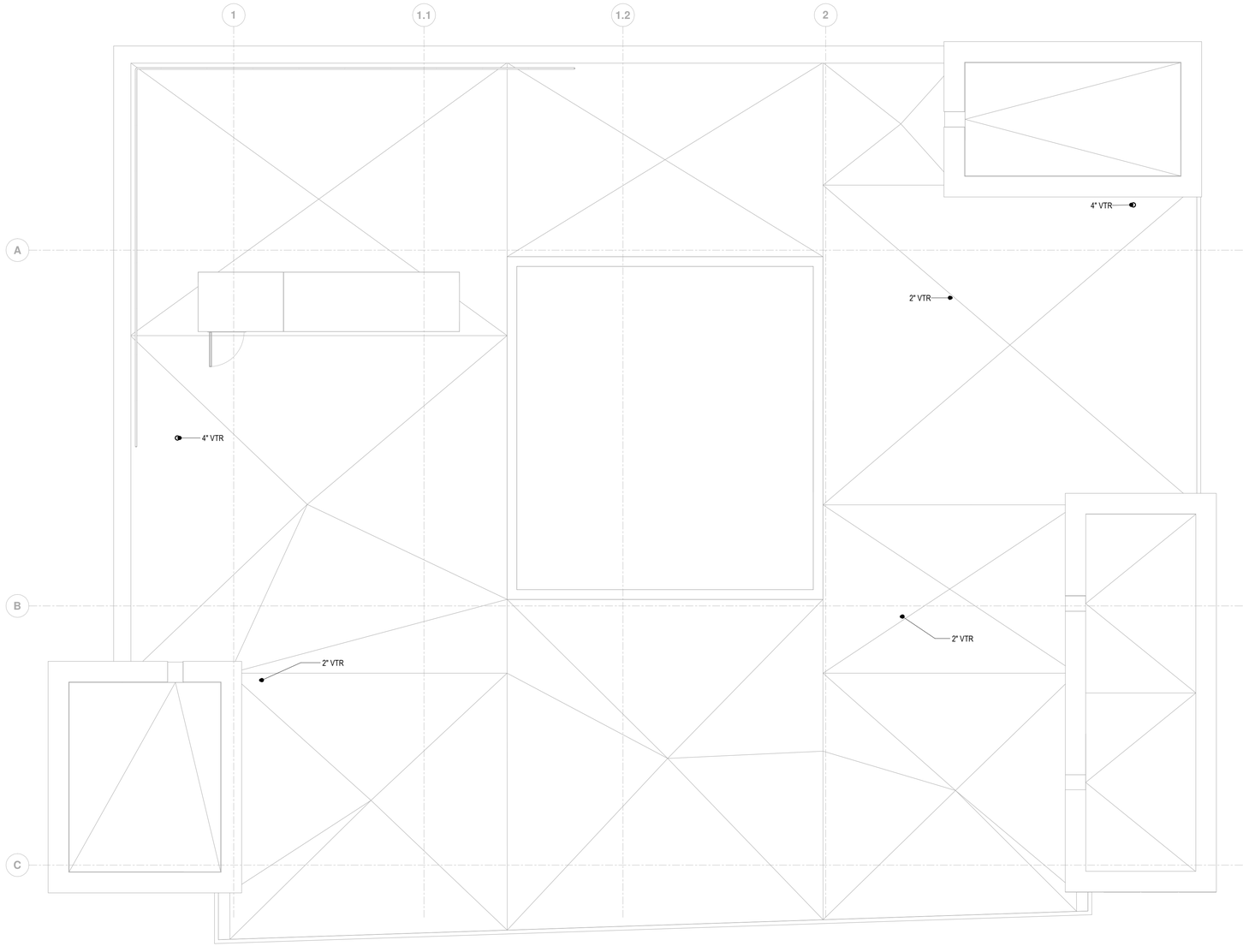
DRAWING TITLE: SECOND FLOOR SANITARY PLAN

SHEET NUMBER: P1.03

7/2/2021 3:49:00 PM

SANITARY PLUMBING GENERAL NOTES

1. SANITARY WASTE PIPING ON P1.01 SHOWN UNDERGROUND. SANITARY VENT PIPING SHALL BE INSTALLED TIGHT TO CEILING. INSTALL SANITARY SEWER AND VENT PIPING WITH PROPER SLOPE PER LOCAL CODE.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. PROVIDE WALL CLEANOUT FOR ALL SANITARY RISERS AT 2'-0" ABOVE FINISHED FLOOR FOR ALL LEVELS.



1 ROOF - SANITARY - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

P T

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EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
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CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

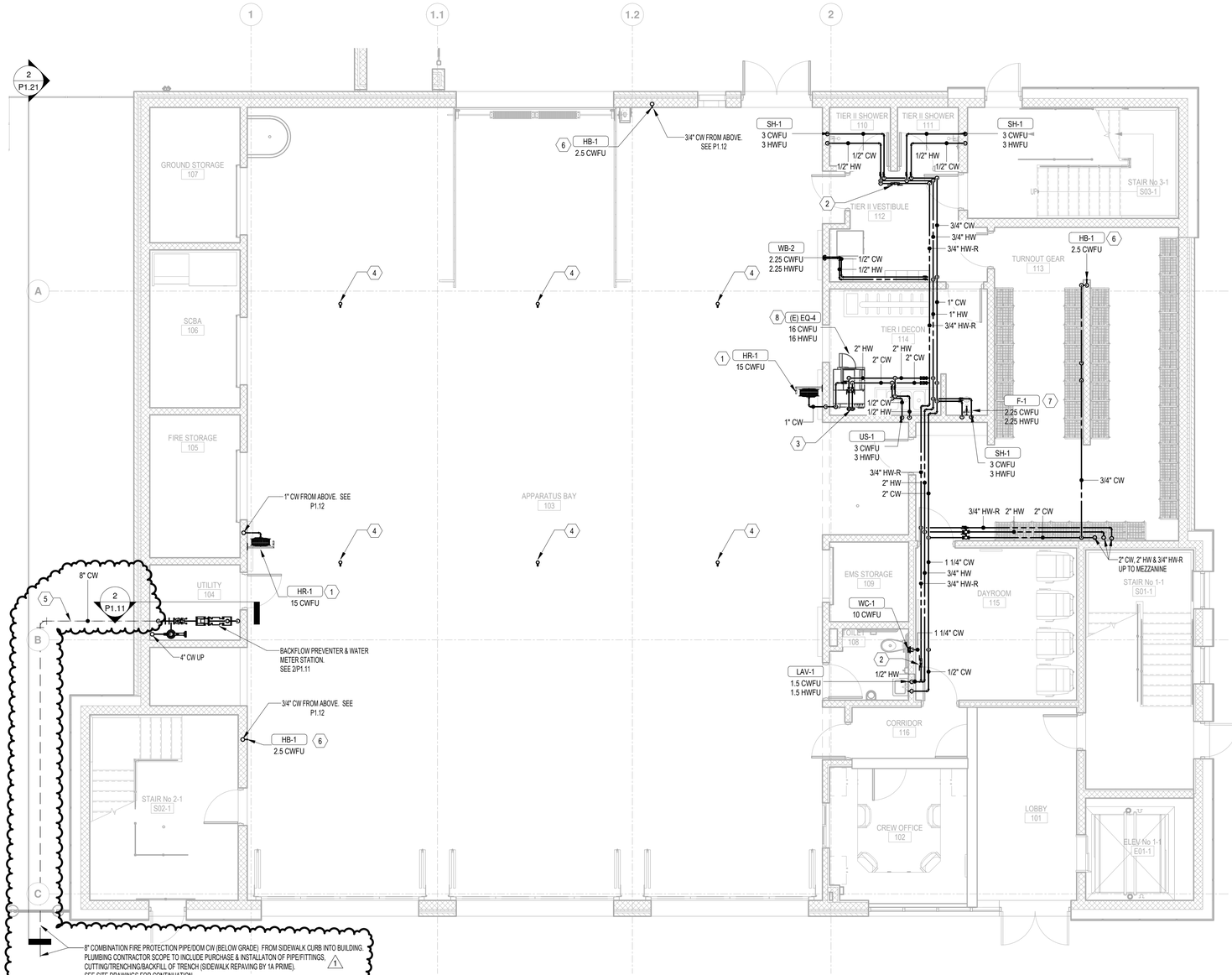
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: ROOF SANITARY PLAN

SHEET NUMBER: P1.04

7/2/2021 3:49:01 PM



1 FIRST FLOOR - DOMESTIC PLUMBING - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

PLUMBING GENERAL NOTES

1. HOT WATER SUPPLY PIPING SERVING PUBLIC LAVATORY FAUCETS SHALL HAVE 0'-6" MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF THE HEATED WATER OR RE-CIRCULATION PIPE CONNECTION TO THE TERMINATION OF THE FIXTURE SUPPLY PIPING. COORDINATE WITH ALL OTHER DISCIPLINES AND FIELD ROUTE HOT WATER PIPING AS NECESSARY.
2. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL FAUCETS. SET TEMPERATURE TO 105 DEGREES FAHRENHEIT.
3. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
4. PROVIDE ISOLATION VALVE FOR ALL DOMESTIC WATER AND NATURAL GAS SYSTEMS AT ALL BRANCHES AND MAINS FROM RISERS. PROVIDE ACCESS PANELS WHERE REQUIRED.
5. ALL DOMESTIC WATER PIPING SYSTEMS AND NATURAL GAS PIPING SHALL BE INSTALLED AS CLOSE TO DECK ABOVE AS POSSIBLE.
6. ALL EXPOSED PIPING IN CEILING SPACE SHALL BE INSTALLED WITH HARD SHELL INSULATION JACKETING.
7. THERE SHALL BE NO EXPOSED PIPING ON ANY EXPOSED BLOCK WALLS. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.

KEYNOTES

1 MOUNT HOSE REEL 60" ABOVE FINISHED FLOOR. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.

2 PROVIDE THERMOSTATIC BALANCING VALVE MANUFACTURED BY CircuitSolver, MODEL CSUA WITH INTEGRAL CHECK VALVE. CONTRACTOR SHALL PLACE VALVE AT ACCESSIBLE LOCATION.

3 1 1/4" CW & 1 1/4" HW PIPING TO DECON WASHING MACHINE. PIPING SHALL TERMINATE AT 4'-0" AFF WITH BALL VALVE. BALL VALVE SHALL HAVE CLOSE POSITION AS VERTICAL DOWN.

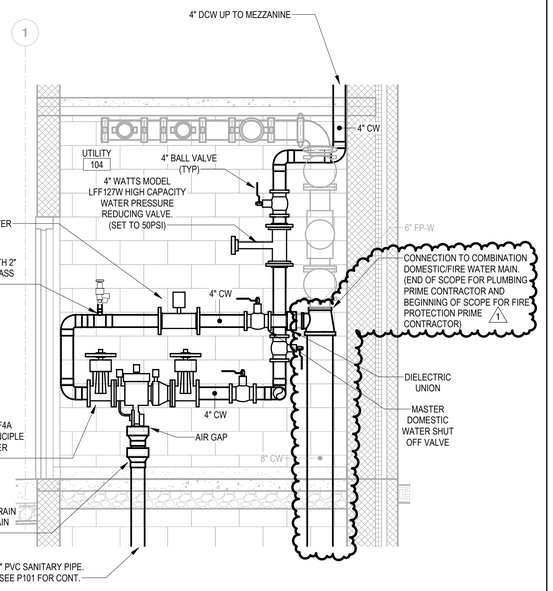
4 3" FULL PORT BALL VALVE 16'-0" ABOVE FINISHED FLOOR. BALL VALVE CLOSED POSITION SHALL BE IN THE VERTICAL DOWN POSITION. PLUMBING PRIME TO COORDINATE FINAL LOCATION OF VERTICAL LEG OF SUPPLY LINE WITH FIRE DEPARTMENTS APPARATUS FILL PORTS.

5 8" COMBINATION FIRE/DOMESTIC WATER MAIN TO SITE BY PLUMBING PRIME CONTRACTOR. SEE 1/ SITE DRAWINGS FOR CONTINUATIONS.

6 ¾" CW PIPING SERVING HB-1 SHALL BE INSTALLED IN CMU WALL AND SHALL EXTEND OUT OF WALL AT PLUMBING FIXTURE.

7 INSTALL F-1 IN SHOWER STALL 2'-0" AFF.

8 PLUMBING CONTRACTOR SHALL RELOCATE (E) EXTRACTOR FROM BASEMENT OF EXISTING FIRE HOUSE TO TIER 1 DECON 114.



2 WATER METER STATION SECTION

1/2" = 1'-0"

0 1' 2' 4'

*HALFTONED PIPING BY FIRE PROTECTION PRIME CONTRACTOR. ALL OTHER PIPING IN VIEW SHALL BE THE RESPONSIBILITY OF THE PLUMBING PRIME CONTRACTOR.

P T

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/2

PROJECT NUMBER: 20-088

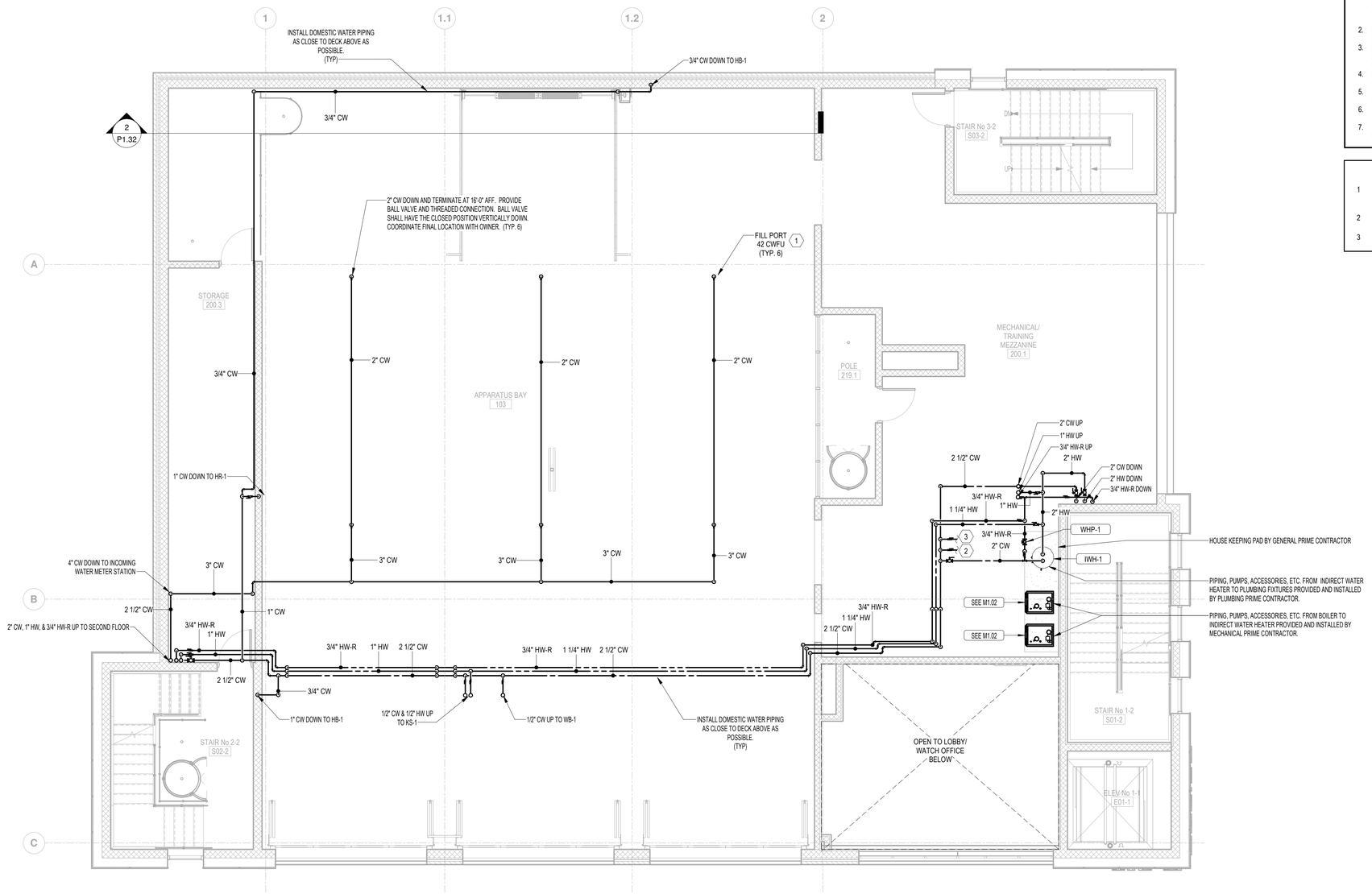
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR DOMESTIC PLAN

SHEET NUMBER: P1.11

8/25/2021 11:50:44 AM



1 MEZZANINE - DOMESTIC PLUMBING - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

PLUMBING GENERAL NOTES

1. HOT WATER SUPPLY PIPING SERVING PUBLIC LAVATORY FAUCETS SHALL HAVE 0'-6" MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF THE HEATED WATER OR RE-CIRCULATION PIPE CONNECTION TO THE TERMINATION OF THE FIXTURE SUPPLY PIPING. COORDINATE WITH ALL OTHER DISCIPLINES AND FIELD ROUTE HOT WATER PIPING AS NECESSARY.
2. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL FAUCETS. SET TEMPERATURE TO 105 DEGREES FAHRENHEIT.
3. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
4. PROVIDE ISOLATION VALVE FOR ALL DOMESTIC WATER AND NATURAL GAS SYSTEMS AT ALL BRANCHES AND MAINS FROM RISERS. PROVIDE ACCESS PANELS WHERE REQUIRED.
5. ALL DOMESTIC WATER PIPING SYSTEMS AND NATURAL GAS PIPING SHALL BE INSTALLED AS CLOSE TO DECK ABOVE AS POSSIBLE.
6. ALL EXPOSED PIPING IN CEILING SPACE SHALL BE INSTALLED WITH HARD SHELL INSULATION JACKETING.
7. THERE SHALL BE NO EXPOSED PIPING ON ANY EXPOSED BLOCK WALLS. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.

KEYNOTES

1 THE BUILDING DOMESTIC COLD WATER SUPPLY SYSTEM HAS BEEN DESIGNED FOR ONLY ONE 2" FILL PORT IN THE APPARATUS BAY TO BE OPERATIONAL AT A TIME. USE OF MORE THAN ONE FILL PORT MAY CAUSE TEMPORARY PRESSURE DROP AT PLUMBING FIXTURES SERVING THE BUILDING.

2 3/4" DOMESTIC COLD WATER PIPING TO SNOW MELT GLYCOL FEEDER. SEE 11/P6.03 FOR DETAIL AND EXTENT OF WORK.

3 3/4" DOMESTIC COLD WATER PIPING TO HEATING HOT WATER BOILER SYSTEM. SEE 5/P6.02 FOR DETAIL AND EXTENT OF WORK.

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1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE DOMESTIC PLAN

SHEET NUMBER: P1.12

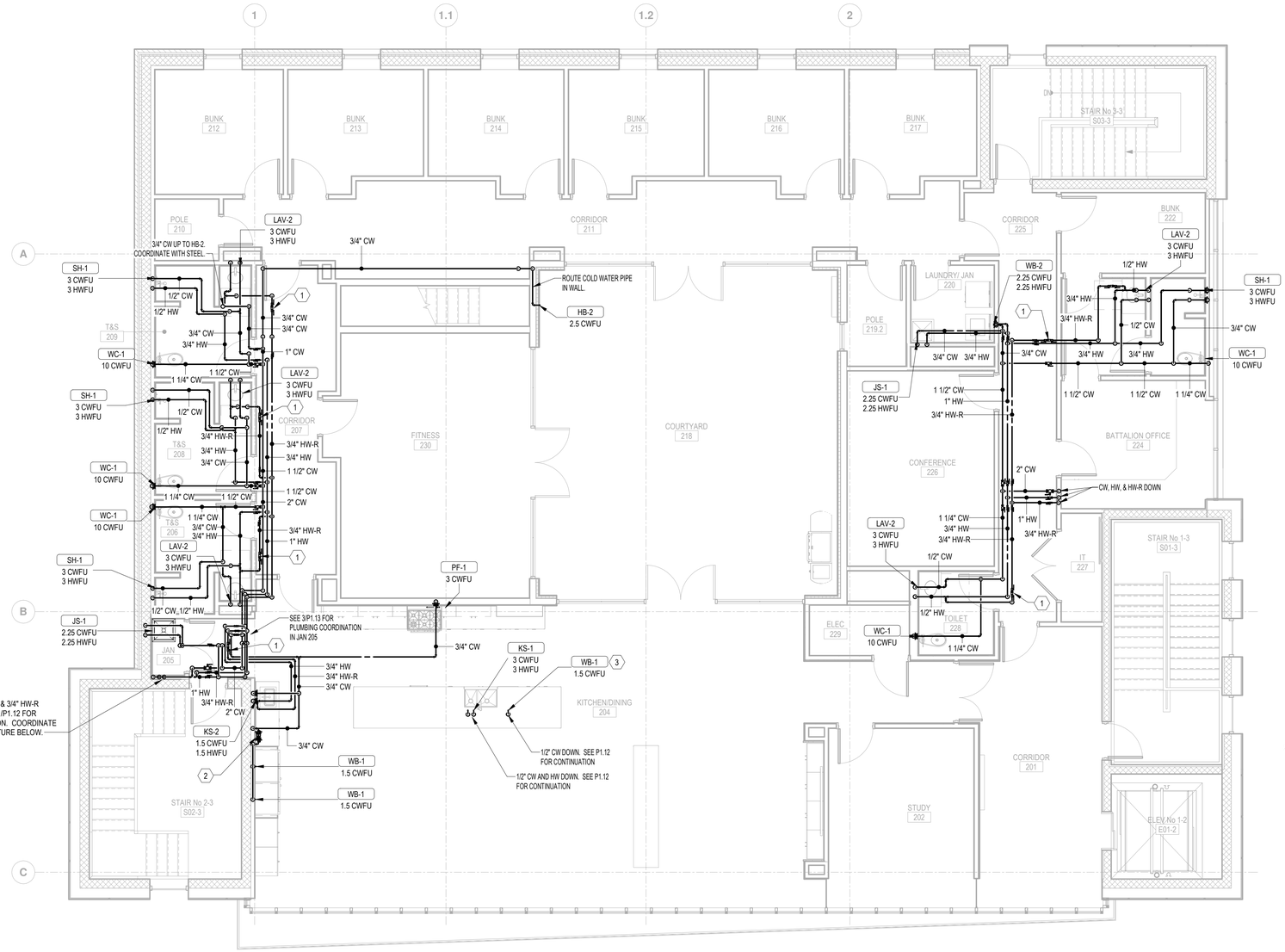
7/2/2021 3:49:17 PM

KEYNOTES

1. PROVIDE THERMOSTATIC BALANCING VALVE MANUFACTURED BY CircuitSolver, MODEL CSUA WITH INTEGRAL CHECK VALVE. CONTRACTOR SHALL PLACE VALVE AT ACCESSIBLE LOCATION.
2. PROVIDE 3M WATER FILTER IN CABINET TO SERVE REFRIGERATOR WALL BOXES. SEE 10/P6.03 FOR DETAIL.
3. WALL BOX FOR DISHWASER UNDERCOUNTER FEED FROM BELOW.

PLUMBING GENERAL NOTES

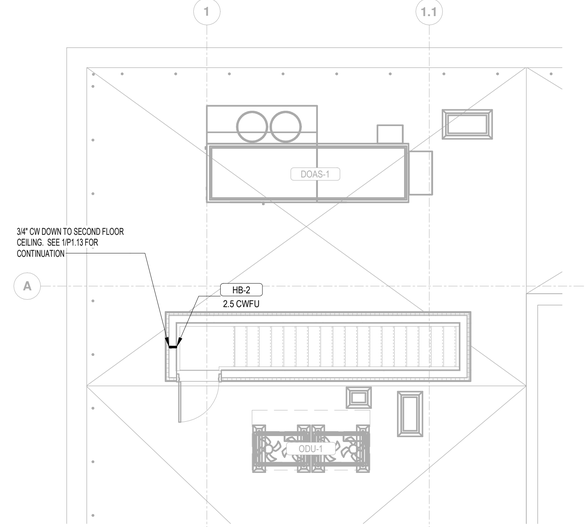
1. HOT WATER SUPPLY PIPING SERVING PUBLIC LAVATORY FAUCETS SHALL HAVE 0'-6" MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF THE HEATED WATER OR RE-CIRCULATION PIPE CONNECTION TO THE TERMINATION OF THE FIXTURE SUPPLY PIPING. COORDINATE WITH ALL OTHER DISCIPLINES AND FIELD ROUTE HOT WATER PIPING AS NECESSARY.
2. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL FAUCETS. SET TEMPERATURE TO 105 DEGREES FAHRENHEIT.
3. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
4. PROVIDE ISOLATION VALVE FOR ALL DOMESTIC WATER AND NATURAL GAS SYSTEMS AT ALL BRANCHES AND MAINS FROM RISERS. PROVIDE ACCESS PANELS WHERE REQUIRED.
5. ALL DOMESTIC WATER PIPING SYSTEMS AND NATURAL GAS PIPING SHALL BE INSTALLED AS CLOSE TO DECK ABOVE AS POSSIBLE.
6. ALL EXPOSED PIPING IN CEILING SPACE SHALL BE INSTALLED WITH HARD SHELL INSULATION JACKETING.
7. THERE SHALL BE NO EXPOSED PIPING ON ANY EXPOSED BLOCK WALLS. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.



1 SECOND FLOOR - DOMESTIC PLUMBING - FLOOR PLAN

3/16" = 1'-0"

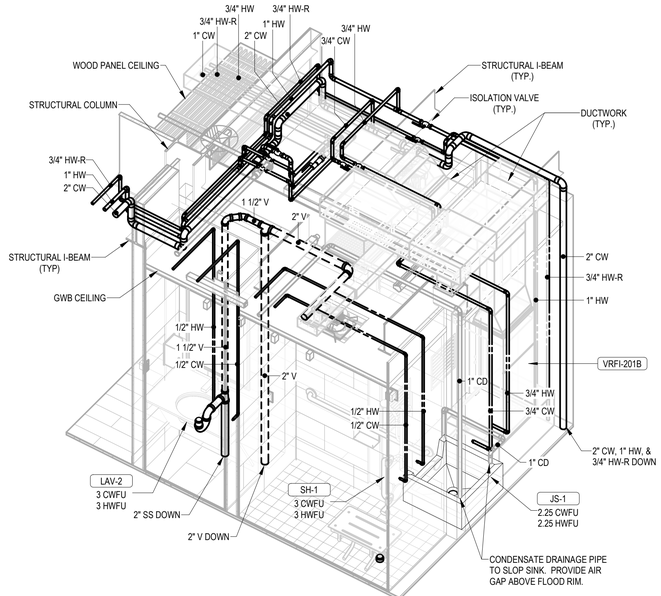
0 4' 8' 12'



2 PARTIAL ROOF - DOMESTIC - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'



3 JAN 205 - PLUMBING COORDINATION

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

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1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR & PARTIAL ROOF DOMESTIC PLAN

SHEET NUMBER: P1.13

7/2/2021 3:49:26 PM

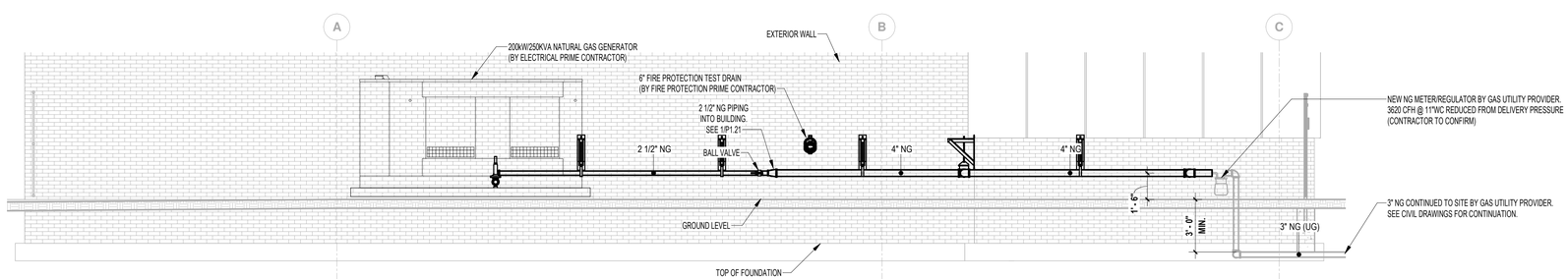
1 FIRST FLOOR - NATURAL GAS - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

NATURAL GAS GENERAL NOTES

1. PROVIDE ISOLATION VALVE FOR ALL NATURAL GAS PIPING AT ALL BRANCHES. PROVIDE ACCESS PANELS WHERE REQUIRED.
2. PROVIDE DRIP & SEDIMENT TRAP AT ALL LOW POINTS IN NATURAL GAS PIPING SYSTEM AS WELL AS IMMEDIATELY PRIOR TO EQUIPMENT.
3. INSTALL NATURAL GAS PIPING WITH 2% GRADE TO DRIP & SEDIMENT TRAPS.
4. PROVIDE STRAINER AND PRESSURE REGULATOR IMMEDIATELY PRIOR TO EQUIPMENT RECEIVING NATURAL GAS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION TO EQUIPMENT.
6. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.



2 NATURAL GAS - EXTERIOR SECTION

1/4" = 1'-0"

0 4' 8' 12'

P T

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SEAL:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

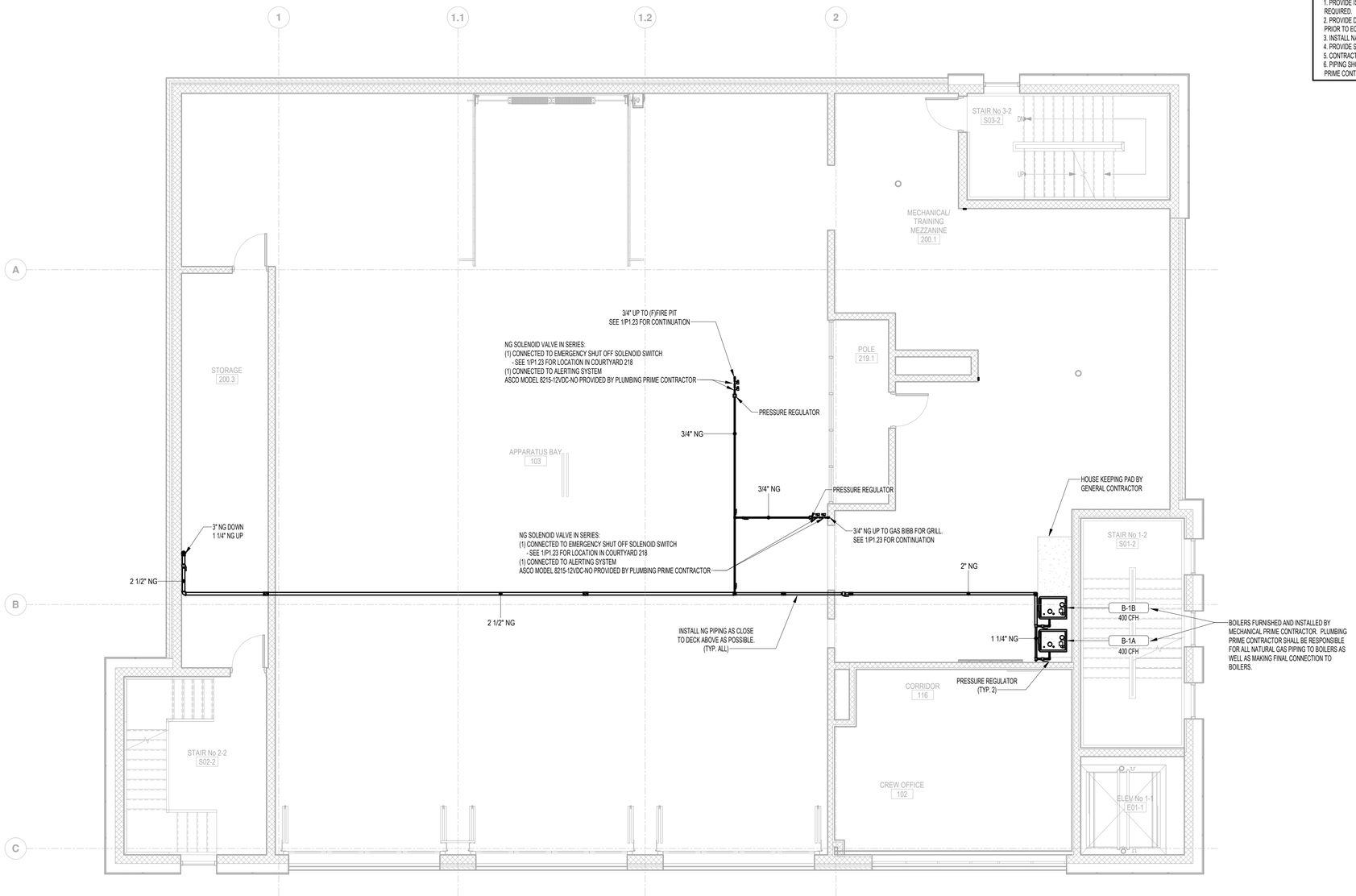
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR NATURAL GAS PLAN

SHEET NUMBER: P1.21

7/2/2021 3:49:31 PM



1 MEZZANINE - NATURAL GAS - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

NATURAL GAS GENERAL NOTES

1. PROVIDE ISOLATION VALVE FOR ALL NATURAL GAS PIPING AT ALL BRANCHES. PROVIDE ACCESS PANELS WHERE REQUIRED.
2. PROVIDE DRIP & SEDIMENT TRAP AT ALL LOW POINTS IN NATURAL GAS PIPING SYSTEM AS WELL AS IMMEDIATELY PRIOR TO EQUIPMENT.
3. INSTALL NATURAL GAS PIPING WITH 2% GRADE TO DRIP & SEDIMENT TRAPS.
4. PROVIDE STRAINER AND PRESSURE REGULATOR IMMEDIATELY PRIOR TO EQUIPMENT RECEIVING NATURAL GAS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION TO EQUIPMENT.
6. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL ETC.

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CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE NATURAL GAS PLAN

SHEET NUMBER: P1.22

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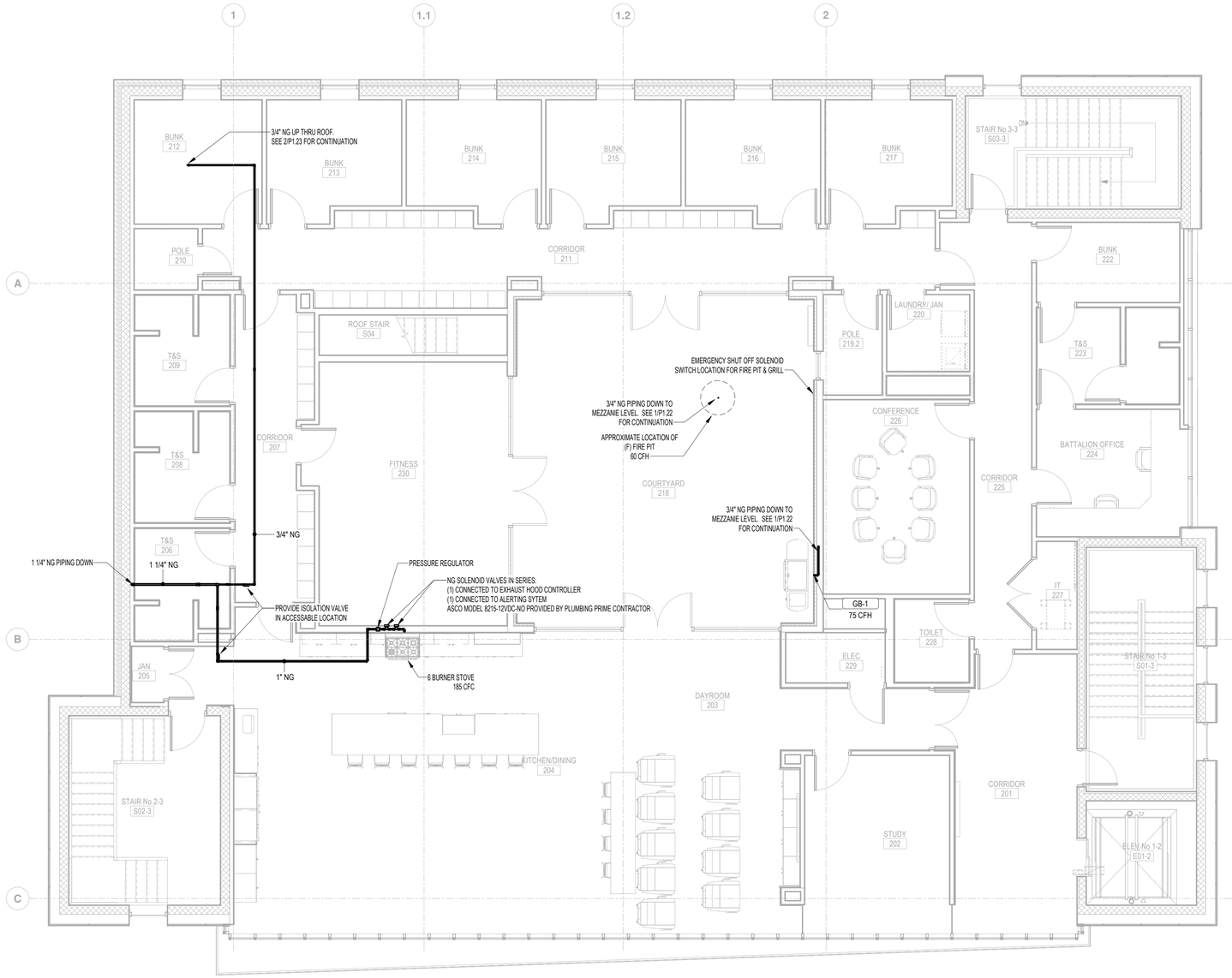
NATURAL GAS GENERAL NOTES

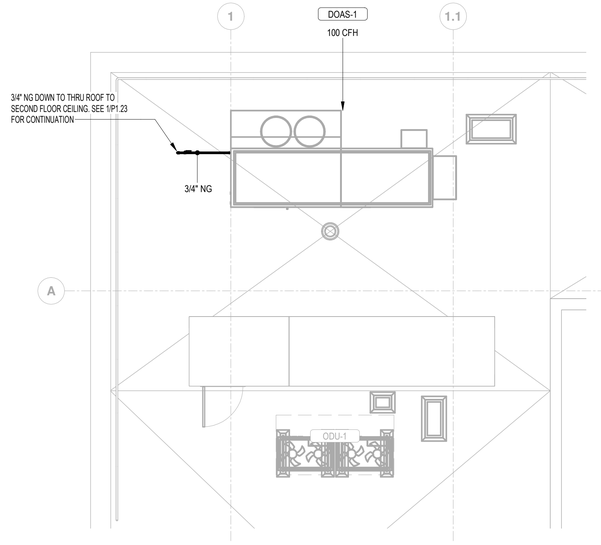
1. PROVIDE ISOLATION VALVE FOR ALL NATURAL GAS PIPING AT ALL BRANCHES. PROVIDE ACCESS PANELS WHERE REQUIRED.
2. PROVIDE DRIP & SEDIMENT TRAP AT ALL LOW POINTS IN NATURAL GAS PIPING SYSTEM AS WELL AS IMMEDIATELY PRIOR TO EQUIPMENT.
3. INSTALL NATURAL GAS PIPING WITH 2% GRADE TO DRIP & SEDIMENT TRAPS.
4. PROVIDE STRAINER AND PRESSURE REGULATOR IMMEDIATELY PRIOR TO EQUIPMENT RECEIVING NATURAL GAS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION TO EQUIPMENT.
6. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.



1 SECOND FLOOR - NATURAL GAS - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'



2 PARTIAL ROOF - NATURAL GAS - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

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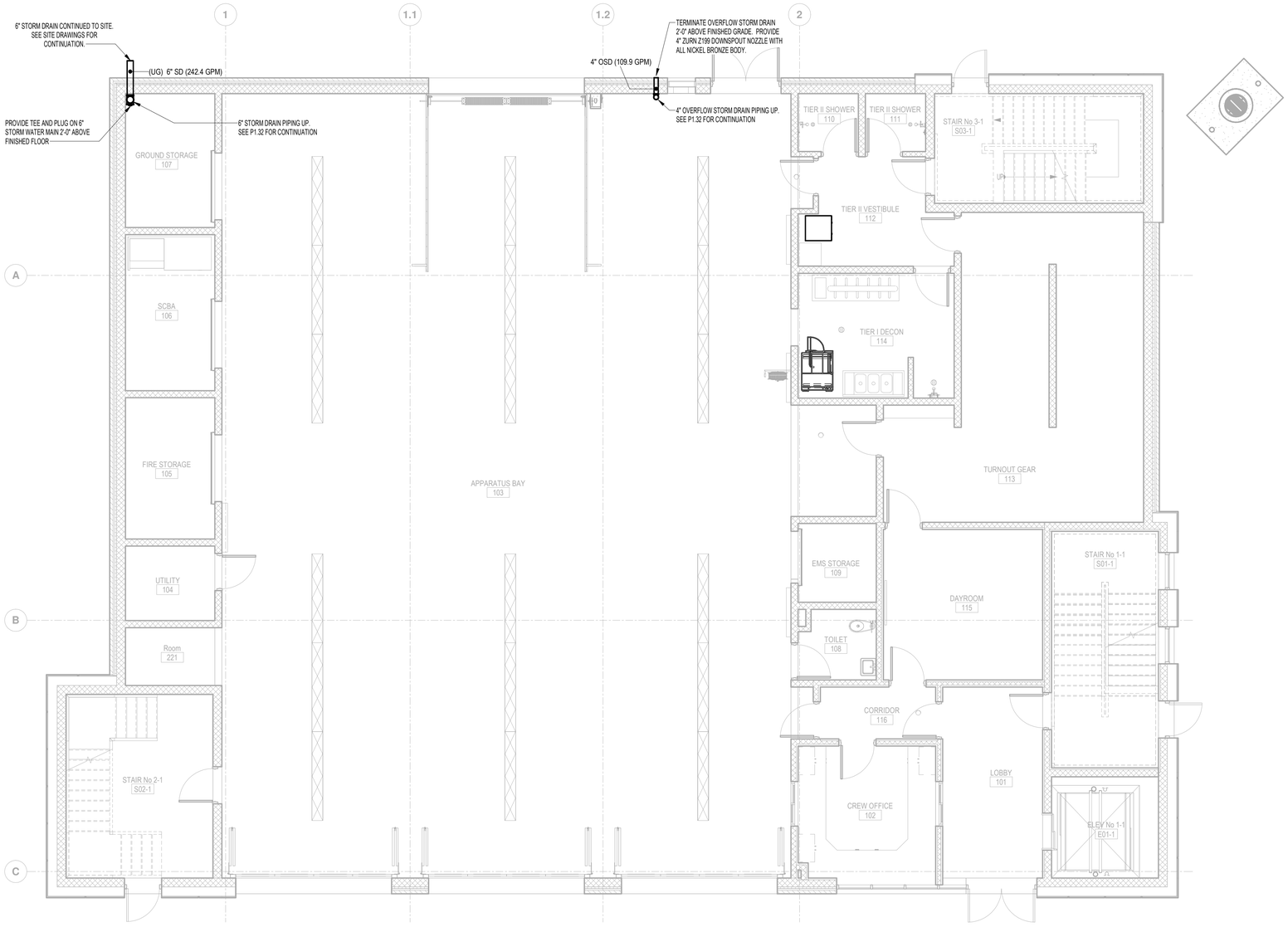
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: SECOND FLOOR & PARTIAL ROOF NATURAL GAS PLAN
SHEET NUMBER: P1.23

7/2/2021 3:49:36 PM



1 FIRST FLOOR - STORM WATER - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

STORM WATER GENERAL NOTES

1. INSTALL STORM WATER PIPING WITH SLOPE PER LOCAL CODE UNLESS INDICATED ON DRAWINGS.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. ALL CEILING CAVITIES IN PROJECT SHALL BE ASSUMED TO BE HVAC RETURN PLENUMS. SEE SPECIFICATION BOOK FOR APPROVED PIPING MATERIALS.

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CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR STORM WATER PLAN

SHEET NUMBER: P1.31

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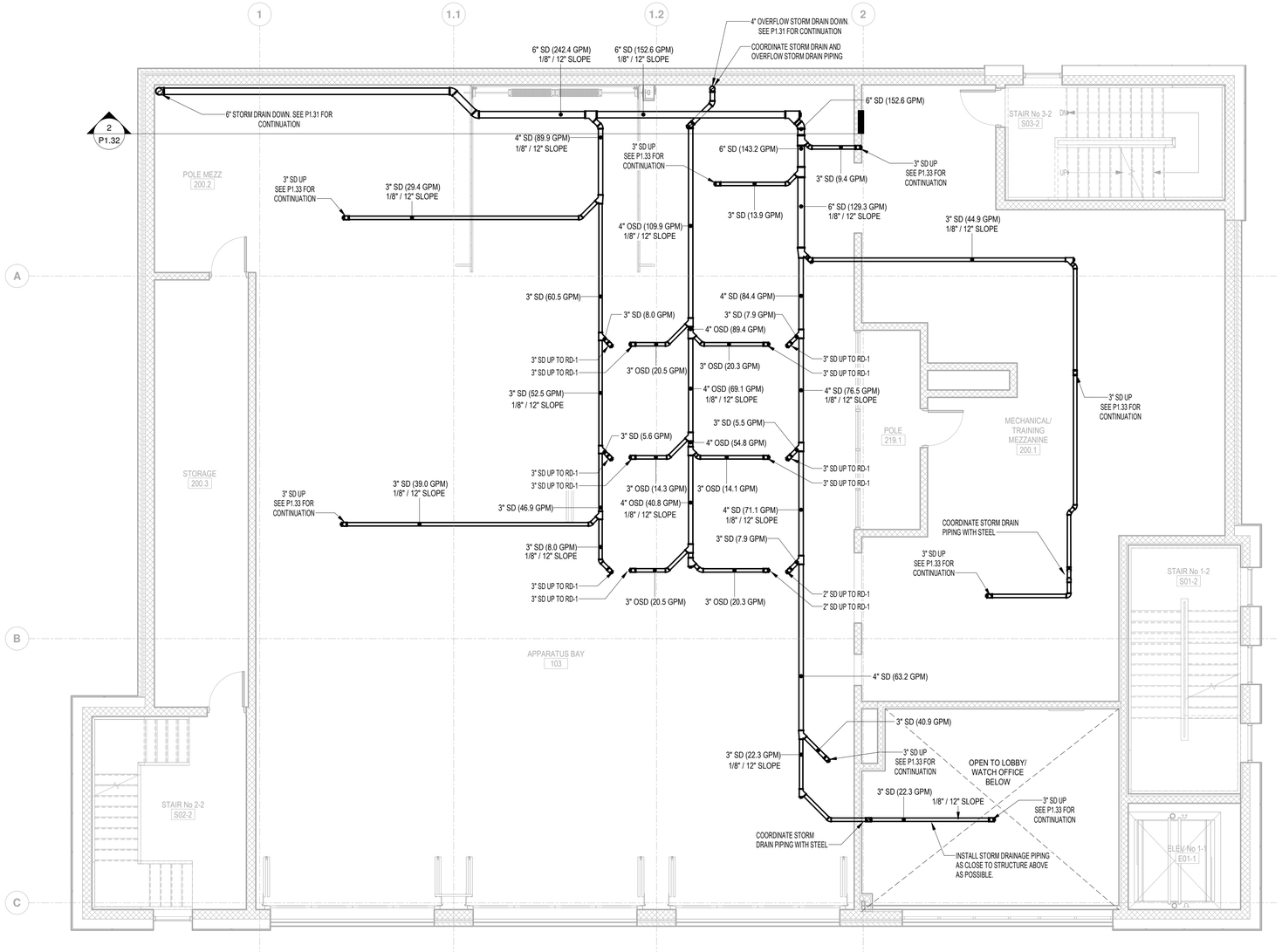
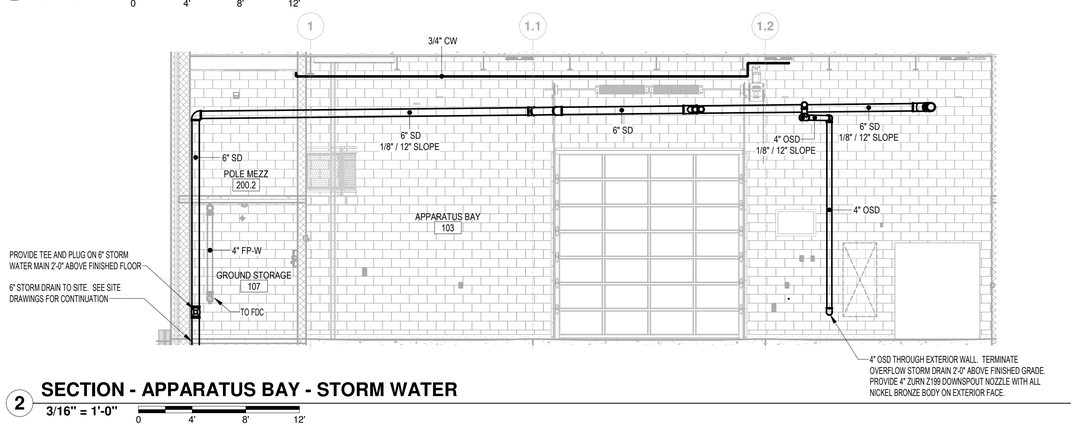


1 MEZZANINE - STORM WATER - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'



2 SECTION - APPARATUS BAY - STORM WATER

3/16" = 1'-0"

0 4' 8' 12'

STORM WATER GENERAL NOTES

1. INSTALL STORM WATER PIPING WITH SLOPE PER LOCAL CODE UNLESS INDICATED ON DRAWINGS.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. ALL CEILING CAVITIES IN PROJECT SHALL BE ASSUMED TO BE HVAC RETURN PLENUMS. SEE SPECIFICATION BOOK FOR APPROVED PIPING MATERIALS.

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1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE STORM WATER PLAN

SHEET NUMBER: P1.32

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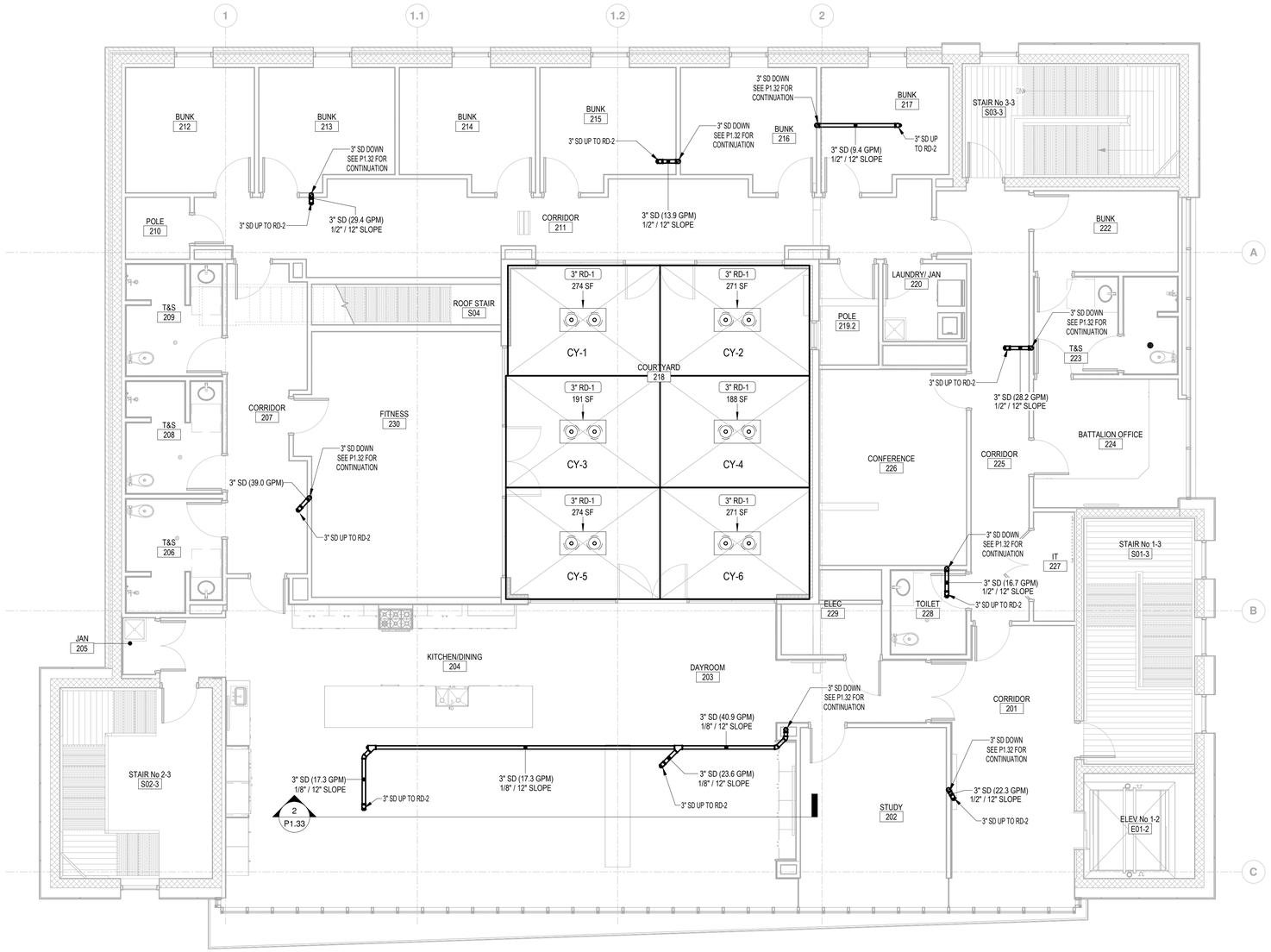


1 SECOND FLOOR - STORM WATER - FLOOR PLAN

3/16" = 1'-0"

0 8' 16' 32'

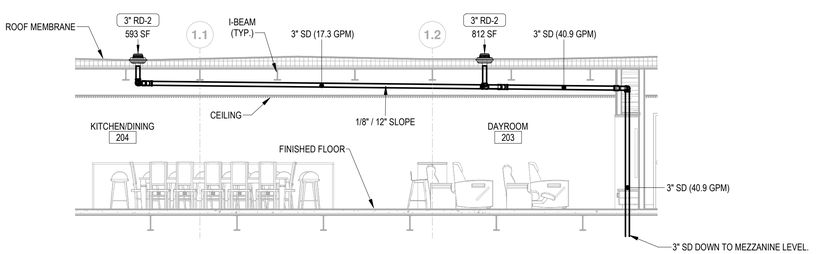
STORM WATER GENERAL NOTES

1. INSTALL STORM WATER PIPING WITH SLOPE PER LOCAL CODE UNLESS INDICATED ON DRAWINGS.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. ALL CEILING CAVITIES IN PROJECT SHALL BE ASSUMED TO BE HVAC RETURN PLENUMS. SEE SPECIFICATION BOOK FOR APPROVED PIPING MATERIALS.

STORM DRAIN CALCULATIONS

ID	DESCRIPTION	PRIMARY DRAIN SIZE	SECONDARY DRAIN SIZE	DESCRIPTION	PROJECTED AREA	RAINFALL RATE (INCH/HR)	SIZING			LOCATION
							PRIMARY FLOW	SECONDARY FLOW	AREA	
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	274 SF	2.8	8.0 GPM	20.5 GPM	274	CY-1
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	271 SF	2.8	7.9 GPM	20.3 GPM	271	CY-2
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	191 SF	2.8	5.6 GPM	14.3 GPM	191	CY-3
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	188 SF	2.8	5.5 GPM	14.1 GPM	188	CY-4
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	274 SF	2.8	8.0 GPM	20.5 GPM	274	CY-5
RD-1	ROOF DRAIN	3"	3"	COMBINATION ROOF DRAIN AND OVERFLOW DRAIN	271 SF	2.8	7.9 GPM	20.3 GPM	271	CY-6
Grand total: 6					1469 SF		42.7 GPM	110 GPM		

NOTE: CONFIRM ROOF DRAIN LOCATIONS / ROOF AREAS WITH INSTALLED FIELD LOCATIONS. ADJUST PROJECTED AREAS AND ROOF DRAIN SIZING ACCORDINGLY.



2 SECOND FLOOR - STORM WATER - SECTION

3/16" = 1'-0"

0 8' 16' 32'

COURTYARD STORM DRAIN SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	QTY	MATERIAL DESCRIPTION		PRIMARY PIPE SIZE	SECONDARY PIPE SIZE	SPECIFICATION
					DRAIN BODY	STRAINER			
RD-1	ROOF DRAIN	SUNDRAINAGE PRODUCTS	RD4020	6	DURABLE COATED CAST IRON	POLYETHYLENE	3"	3"	DURABLE COATED CAST IRON BODIES WITH LOW PROFILE POLY DOME, COMBINED FLASHING CLAMP AND GRAVEL STOP FOR ROOF DRAIN AND COMBINED FLASHING CLAMP AND 3 1/2" HIGH INTERNAL WATER DAM FOR OVERFLOW DRAIN. TOP MOUNT DECK PLATE WITH SECURING HOLES TO RECEIVING BOTH DRAINS.
Grand total: 6									

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR STORM WATER PLAN
SHEET NUMBER: P1.33

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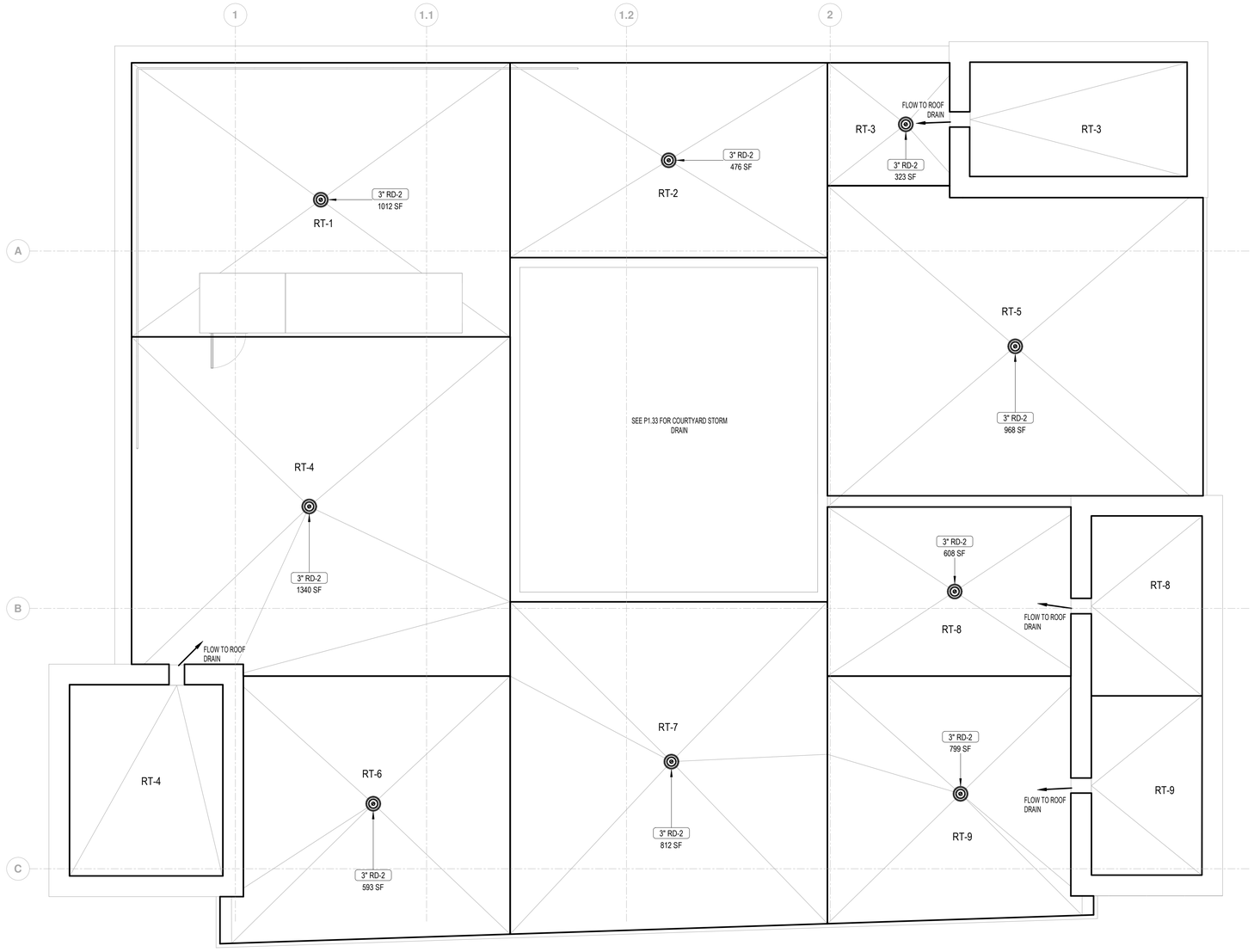

1 ROOF - STORM WATER - FLOOR PLAN

3/16" = 1'-0"

0 4' 8' 12'

STORM WATER GENERAL NOTES

1. INSTALL STORM WATER PIPING WITH SLOPE PER LOCAL CODE UNLESS INDICATED ON DRAWINGS.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. ALL CEILING CAVITIES IN PROJECT SHALL BE ASSUMED TO BE HVAC RETURN PLENUMS. SEE SPECIFICATION BOOK FOR APPROVED PIPING MATERIALS.

STORM DRAIN CALCULATIONS

ID	DESCRIPTION	SIZE	DESCRIPTION	PROJECTED AREA	RAINFALL RATE (INCH/HR)	SIZING FLOW	SIZING AREA	LOCATION
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	1012 SF	2.8	29.4 GPM	1012	RT-1
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	476 SF	2.8	13.9 GPM	476	RT-2
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	323 SF	2.8	9.4 GPM	323	RT-3
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	1340 SF	2.8	39.0 GPM	1340	RT-4
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	968 SF	2.8	28.2 GPM	968	RT-5
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	593 SF	2.8	17.3 GPM	593	RT-6
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	812 SF	2.8	23.6 GPM	812	RT-7
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	608 SF	2.8	16.7 GPM	608	RT-8
RD-2	ROOF DRAIN	3"	PRIMARY STORM OUT	799 SF	2.8	22.3 GPM	799	RT-9
Grand total: 9				6931 SF		199.7 GPM		

NOTE: CONFIRM ROOF DRAIN LOCATIONS / ROOF AREAS WITH INSTALLED FIELD LOCATIONS. ADJUST PROJECTED AREAS AND ROOF DRAIN SIZING ACCORDINGLY.

ROOF STORM DRAIN SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	QTY	MATERIAL DESCRIPTION DRAIN BODY	MATERIAL DESCRIPTION STRAINER	WASTE PIPE SIZE	SPECIFICATION
RD-2	ROOF DRAIN	MIFAB	1080	15	LACQUERED CAST IRON	POLYETHYLENE	3"	
Grand total: 15								

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: ROOF STORM WATER PLAN
SHEET NUMBER: P1.34

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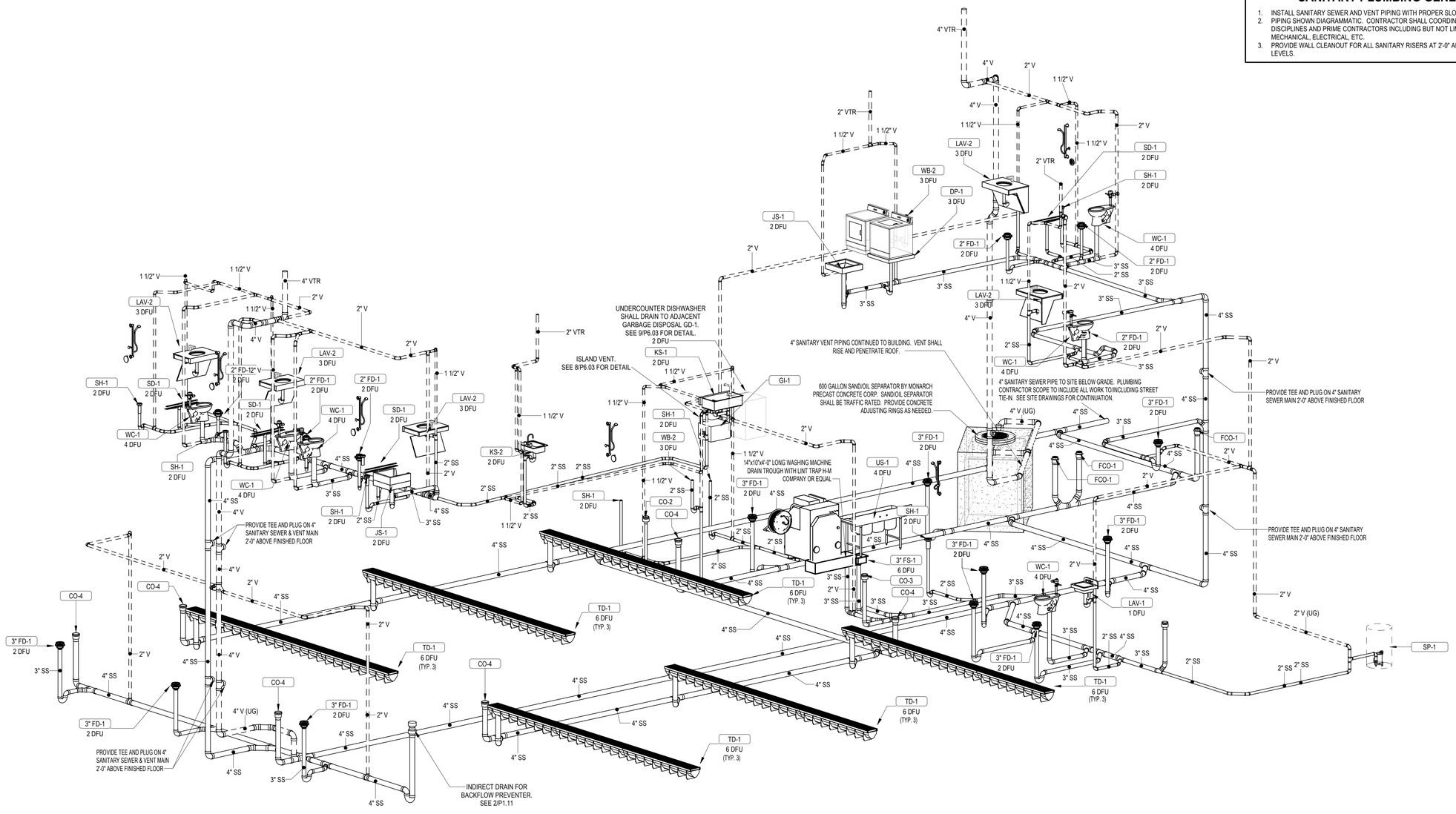
SANITARY PLUMBING GENERAL NOTES

1. INSTALL SANITARY SEWER AND VENT PIPING WITH PROPER SLOPE PER LOCAL CODE.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. PROVIDE WALL CLEANOUT FOR ALL SANITARY RISERS AT 2'-0" ABOVE FINISHED FLOOR FOR ALL LEVELS.



1 SANITARY WASTE AND VENT - RISER DIAGRAM

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EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

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CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

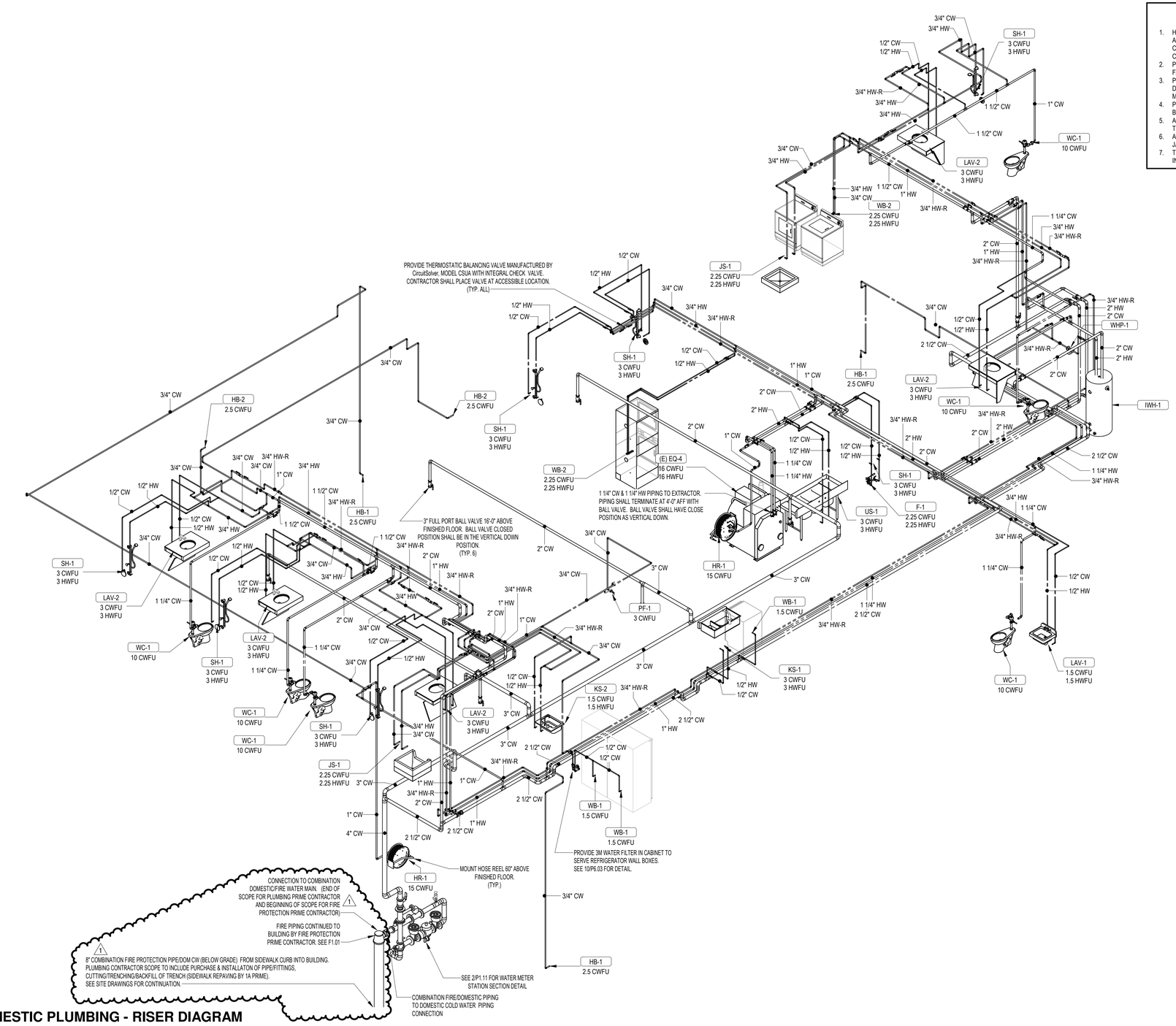
PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: WASTE & VENT RISER DIAGRAMS
SHEET NUMBER: P3.01

7/2/2021 3:49:53 PM

PLUMBING GENERAL NOTES

1. HOT WATER SUPPLY PIPING SERVING PUBLIC LAVATORY FAUCETS SHALL HAVE 0'-6" MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF THE HEATED WATER OR RE-CIRCULATION PIPE CONNECTION TO THE TERMINATION OF THE FIXTURE SUPPLY PIPING. COORDINATE WITH ALL OTHER DISCIPLINES AND FIELD ROUTE HOT WATER PIPING AS NECESSARY.
2. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL FAUCETS. SET TEMPERATURE TO 105 DEGREES FAHRENHEIT.
3. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
4. PROVIDE ISOLATION VALVE FOR ALL DOMESTIC WATER AND NATURAL GAS SYSTEMS AT ALL BRANCHES AND MAINS FROM RISERS. PROVIDE ACCESS PANELS WHERE REQUIRED.
5. ALL DOMESTIC WATER PIPING SYSTEMS AND NATURAL GAS PIPING SHALL BE INSTALLED AS CLOSE TO DECK ABOVE AS POSSIBLE.
6. ALL EXPOSED PIPING IN CEILING SPACE SHALL BE INSTALLED WITH HARD SHELL INSULATION JACKETING.
7. THERE SHALL BE NO EXPOSED PIPING ON WALLS IN APPARATUS BAY AREA. ALL PIPING SHALL BE INSTALLED EMBEDDED WITHIN BLOCK WALL.



1 DOMESTIC PLUMBING - RISER DIAGRAM

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088

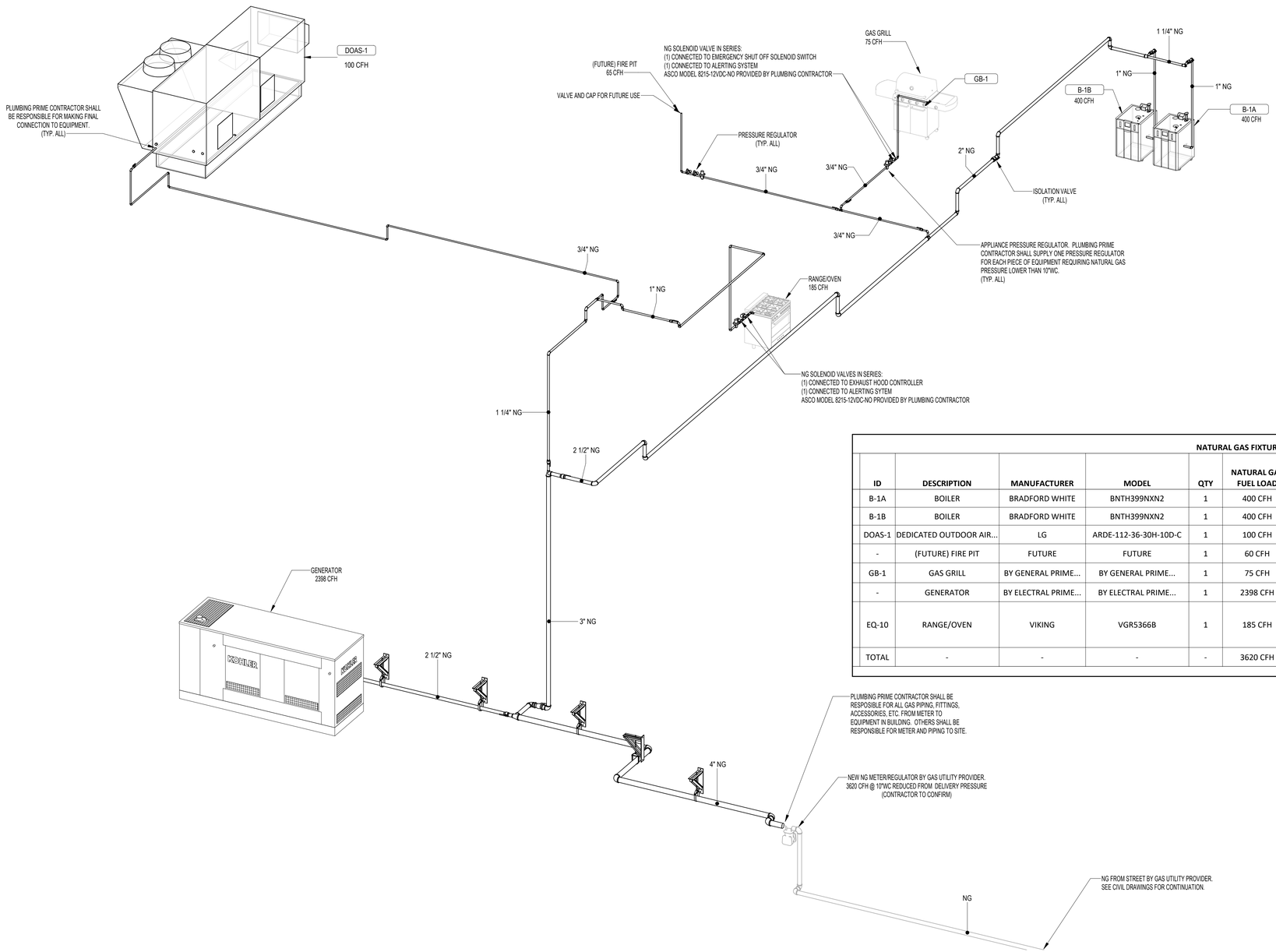
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: DOMESTIC RISER DIAGRAM

SHEET NUMBER: P3.11

8/25/2021 11:50:51 AM



1 NATURAL GAS RISER DIAGRAM

NATURAL GAS GENERAL NOTES

1. PROVIDE ISOLATION VALVE FOR ALL NATURAL GAS PIPING AT ALL BRANCHES. PROVIDE ACCESS PANELS WHERE REQUIRED.
2. PROVIDE DRIP & SEDIMENT TRAP AT ALL LOW POINTS IN NATURAL GAS PIPING SYSTEM AS WELL AS IMMEDIATELY PRIOR TO EQUIPMENT.
3. INSTALL NATURAL GAS PIPING WITH 2% GRADE TO DRIP & SEDIMENT TRAPS.
4. PROVIDE STRAINER AND PRESSURE REGULATOR IMMEDIATELY PRIOR TO EQUIPMENT RECEIVING NATURAL GAS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION TO EQUIPMENT.
6. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.

NATURAL GAS FIXTURE SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	QTY	NATURAL GAS FUEL LOAD	NATURAL GAS ROUGH-I...	GAS PRESSURE REQUIRED (MIN/MAX)	FURNISHING CONTRACTOR
B-1A	BOILER	BRADFORD WHITE	BNTH399NXN2	1	400 CFH	3/4"	4" WC / 13" WC	BY MECHANICAL PRIME CONTRACTOR
B-1B	BOILER	BRADFORD WHITE	BNTH399NXN2	1	400 CFH	3/4"	4" WC / 13" WC	BY MECHANICAL PRIME CONTRACTOR
DOAS-1	DEDICATED OUTDOOR AIR...	LG	ARDE-112-36-30H-10D-C	1	100 CFH	3/4"	6" WC / 14" WC	BY MECHANICAL PRIME CONTRACTOR
-	(FUTURE) FIRE PIT	FUTURE	FUTURE	1	60 CFH	3/4"		FUTURE
GB-1	GAS GRILL	BY GENERAL PRIME...	BY GENERAL PRIME...	1	75 CFH	3/4"		GRILL BY GENERAL PRIME CONTRACTOR / GAS BIBB BY PLUMBING...
-	GENERATOR	BY ELECTRAL PRIME...	BY ELECTRAL PRIME...	1	2398 CFH	2"	7" WC / 11" WC	BY ELECTRAL PRIME CONTRACTOR
EQ-10	RANGE/OVEN	VIKING	VGR5366B	1	185 CFH	3/4"	5" WC / 14" WC	BY GENERAL PRIME CONTRACTOR. PLUMBING CONTRACTOR TO CONFIRM GAS PRESSURE REQUIREMENTS AND PROVIDE APPLIANCE PRESSURE REGULATOR IF REQUIRED
TOTAL	-	-	-	-	3620 CFH	-		-

MW STUDIOS
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123

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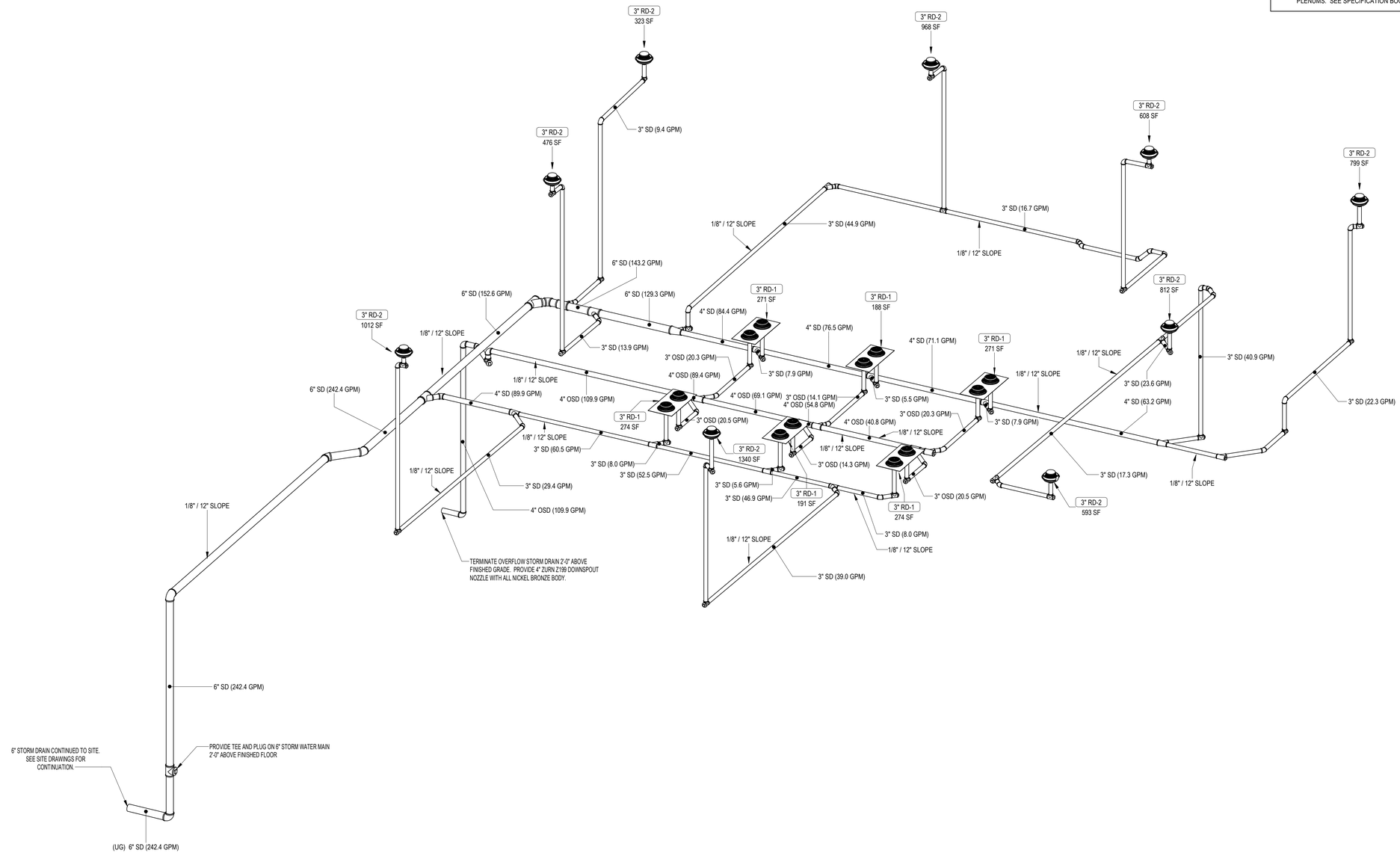
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: NATURAL GAS RISER DIAGRAM
SHEET NUMBER: P3.21

7/2/2021 3:50:02 PM

STORM WATER GENERAL NOTES

1. INSTALL STORM WATER PIPING WITH SLOPE PER LOCAL CODE UNLESS INDICATED ON DRAWINGS.
2. PIPING SHOWN DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE PIPING WITH ALL OTHER DISCIPLINES AND PRIME CONTRACTORS INCLUDING BUT NOT LIMITED TO; STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.
3. ALL CEILING CAVITIES IN PROJECT SHALL BE ASSUMED TO BE HVAC RETURN PLENUMS. SEE SPECIFICATION BOOK FOR APPROVED PIPING MATERIALS.



1 STORM WATER RISER DIAGRAM

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NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: STORM WATER RISER DIAGRAM

SHEET NUMBER: P3.31

7/2/2021 3:50:03 PM

Plumbing Fixture Schedule

	ID	Count	Manufacturer	Model	Description	DFU	CWFU	HWFU	Type Comments
	CO-2	1	Zurn Industries, LLC	Z1400-BZ1	Floor Cleanout with Type B Cover and EZ1™ Technology				ZN1400-2NH-5BZ1
	CO-3	2	Zurn Industries, LLC	Z1400-BZ1	Floor Cleanout with Type B Cover and EZ1™ Technology				ZN1400-3NH-5BZ1
	CO-4	6	Zurn Industries, LLC	Z1400-BZ1	Floor Cleanout with Type B Cover and EZ1™ Technology				D.C.C.I. WITH POLISHED NICKEL BRONZE TOP.
	DP-1	1	CAMCO		27" X 25" POLYPROPYLENE WASHING MACHINE DRAIN PAN	3			
(E)	EQ-4	1	MILNOR	MWT27X5	RIGID-MOUNT WASHER-EXTRACTOR WITH 60 LB. CAPACITY.	6	16	16	PLUMBING CONTRACTOR SHALL RELOCATE (E) EXTRACTOR FROM BASEMENT OF EXISTING FIRE HOUSE TO TIER 1 DECON 114.
	F-1	1	Fiat Products	830-AA	SERVICE SINK FAUCET		2.25	2.25	CHROME PLATED, FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOD AND 3/4" HOSE THREAD ON SPOUT. 8" CENTERSET.
	FCO-1	3	Zurn Industreis, LLC	Z1474	HEAVY DUTY CLEANOUT HOUSING. DURA-COATED CAST IRON BODY WITH INTEGRAL ANCHOR FLANGE, SECURED SCORIATED COVER WITH LIFTING DEVICE. THE CLEANOUT HOUSING HAS AN APPROXIMATE WEIGHT OF 38 LBS.				FURNISH WITH VANDAL-PROOF SCREW AND INTERANAL CLEANOUT FURRULE WITH PLUG Z1440 (4" NO-HUB OUTLET)
	FD-1	16	Zurn Industreis, LLC	EZ1-PV3-SS	5" TOP ASSEMBLY ADJUSTABLE ON GRADE FLOOR DRAIN WITH EZ1 TECHNOLOGY.	2			3" OUTLET. FURNISH WITH ROUND STAINLESS STEEL STRAINER.
	FS-1	1	Zurn Industreis, LLC	FD2375	12"X12" A.R.E. FLOOR SINK WITH 6" SUMP DEPTH.	3			3" NO HUB OUTLET. FURNISH WITH FULL GRATE.
	GB-1	1	BURNABY MANUFACTURING LTD	GR0101-SS-50	RECESSED STAINLESS STEEL GAS PLUG WITH 3/8" HOSE CONNECTION		2.5		BOX FACE FINISH AND BOX FINAL LOCATION/ELEVATION SHALL BE COORDINATED WITH ARCHITECT.
	GI-1	1	THERMACO BIG DIPPER	W-200-IS	IS POINT SOURCE AUTOMATIC GREASE REMOVAL SYSTEM				STAINLESS STEEL, 115V , 60 HZ, 1Ø. 102 AMP, 20GPM PEAK FLOW, 2" INLET/OUTLET
	HB-1	3	Jay R. Smith Mfg. Co.	5670	BENT NOSE HOSE VALVE WITH FLANGE FOR INTERIOR AND/OR MILD CLIMATE.		2.5		FURNISH WITH VACUUM BREAKER
	HB-2	2	Jay R. Smith Mfg. Co.	5515	GAURDIAN PLUS DUAL CHECK 1/4 TURN NON-FREEZE HYDRANT WITH AUTOMATIC DRAINING INTEGRAL VACUUM BREAKER, INTEGRAL SERVICE SHUT-OFF VALVE, CUAL CHECK VALVE, AND STAINLESS STEEL BOX.		2.5		BOX FACE FINISH AND BOX FINAL LOCATION/ELEVATION SHALL BE COORDINATED WITH ARCHITECT.
	HR-1	2	Reelcraft	D9399 OLPB	ULTIMATE DUTY SPRING RETRACTABLE HOSE REEL.		15		PROVIDE 75'-0" LONG 3/4" HOSE AND WALL MOUNTED UNIVERSAL SWING BRACKET 600980. MOUNT HOSE REEL APPROXIMATELY 5'-0" ABOVE FINISHED FLOOR.
	JS-1	2	Fiat Products	MSB-2424	MOP SINK, 24"X24"X10" DEEP, FLOOR MOUNTED, MOLDED-STONE "SMC" ONE PIECE HOMOGENEOUS PRODUCT, AND INTEGRAL DRAIN WITH S.S. DOMED STRAINER AND LINT BASKET 3" OUTLET	2	2.25	2.25	PROVIDE WITH SERVICE FAUCET 830-AA, HOSE AND HOSE BRACKET 832-AA, AND MOP HANGER 889-CC
	KS-1	1	ELKAY	ELUHF332010	LUSTERTONE™ CLASSIC STAINLESS STEEL 33" X 20-1/2" X 10", EQUAL DOUBLE BOWL FARMHOUSE SINK. SINK IS MANUFACTURED FROM 18 GAUGE 304 STAINLESS STEEL WITH A LUSTROUS SATIN FINISH, REAR CENTER DRAIN PLACEMENT, AND SIDES AND BOTTOM PADS.	2	3	3	FURNISH WITH ELKAY AVADO SINGLE HOLE KITCHEN FAUCET WITH SEMI-PROFESSIONAL SPOUT AND LEVER HANDLE, MODEL LKAV2061. FAUCET FINISH SHALL BE LUSTROUS STEEL (LS).
	KS-2	1	ELKAY	ELUHAD131650PD	ELKAY LUSTERTONE CLASSIC STAINLESS STEEL 16"x18-1/2"x4-7/8" SINGLE BOWL UNDERMOUNT ADA SINK WITH PERFECT DRAIN. 304 STAINLESS STEEL WITH A LUSTROUS SATIN FINISH.	2	1.5	1.5	FURNISH WITH ELKAY AVADO SINGLE HOLE KITCHEN FAUCET WITH SEMI-PROFESSIONAL SPOUT AND LEVER HANDLE, MODEL LKAV2061. FAUCET FINISH SHALL BE LUSTROUS STEEL (LS).
	LAV-1	1	ELKAY	WCLWO1923OSDC	ELKAY STURDIBILT STAINLESS STEEL 19" X 23" X 4", WALL HUNG SINGLE BOWL LAVATORY SINK KIT. SINK IS MANUFACTURED FROM 304 STAINLESS STEEL WITH A LUSTROUS SATIN FINISH, REAR CENTER DRAIN PLACEMENT, AND BOTTOM ONLY PADS.	1	1.5	1.5	FURNISH WITH ELKAY LKD232SBH5C FAUCET. FAUCET FINISH SHALL BE LUSTROUS SATIN. PROVIDE WITH ADA-COMPLIANT UNDERSINK PIPE PROTECTION WHERE SUPPLY AND SANITARY PIPING IS EXPOSED.
	LAV-2	5	Kohler Company	K-2882	17-1/4"x13"x6-3/4" VERTICYL RECTANGLE UNDERMOUNT BATHROOM SINK, VITREOUS CHINA.	3	3	3	FURNISH WITH KOHLER JULY SINGLE-HOLE BATHROOM SINK FAUCET MODEL K-98146-4. COORDINATE FINISH WITH ARCHITECT. PROVIDE WITH ADA-COMPLIANT UNDERSINK PIPE PROTECTION WHERE SUPPLY AND SANITARY PIPING IS EXPOSED.
	PF-1	1	Kohler Company	K-99270	ARTIFACTS WALL-MOUNT POT FILLER FAUCET.		3		22" EXTENDED SPOUT. POT FILLER FINISH SHALL BE VIBRANT STAINLESS.
	SD-1	4	Quickdrain USA	PLD36 - Drain Body 36	Channel Drainage System	2			PROLINE DRAIN BODY, 18 GUAGE 316L STAINLESS STEEL CUSTOM LINEAR FLOOR DRAIN. DRAIN BODY CAN BE ANY SIZE FROM 10" TO 100". INTERNALLY PITCHED CHANNEL DRAIN BODY. 34" MAXIMUM HORIZONTAL DISTANCE FOR PITCHED CHANNEL TO WASTE OUTLET. 2" I.D. SCHEDULE 10 STEEL DOWN SPOUT WASTE OUTLET CAN BE LOCATED AT VIRTUALLY ANY LOCATION.
	SH-1 ⚠1	7	KOHLER	SEE COMMENTS	MULTIFUNCTION SHOWER HEAD ON SLIDE BAR WITH HOSE AND FLOOR DRAIN.	2	3	3	PROVIDE KOHLER K-99243-G-CP SHOWER SLIDE BAR KIT, KOHLER K-98351-CP WALL-MOUNT SUPPLY ELBOW WITH CHECK VALVE, KOHLER K-TS98147-4-CP RITE-TEMP VALVE TRIM, & KOHLER K-8304-K VALVE BODY & CARTRIDGE KIT COMPLETE. SHOWER SYSTEM SHALL BE ASSE 1016 COMPLIANT TYPE "TP" THERMOSTATIC/PRESSURE BALANCING COMBINATION VALVE WITH LEVER HANDLE WITH ARM AND FLANGE, INTEGRAL STOPS, AND IN-LINE VACUUM BREAKER. PROVIDE WITH MANUFACTURER'S FLOW RATE RESTRICTOR ON SHOWERHEAD. PROVIDE ZURN EZ-PVZ-SS 5" TOP ASSEMBLY ADJUSTABLE ON GRADE FLOOR DRAIN WITH EZ1 TECHNOLOGY AS SHOWER CENTER DRAIN. INSTALL SHOWER SYSTEM PER ADA REQUIREMENTS.
	TD-1	18	Watts Water Technologies, Inc.	Dead Level P	6"(152) wide x 48"(1219) long (standard) UV stabilized glass-filled polypropylene frame, UV stabilized talc-filled polypropylene channels with integral 4"(102) No Hub bottom outlet(s). System shall be frame-anchored, with DI grating to suit DIN Class E load rating with Frame Guards.	6			DUCTILE IRON TO COME WITH A RUST INHIBITIVE COATING.
	US-1	1	EAGLE GROUP	312-12-3-12	HEAVY GAUGE TYPE 304 STAINLESS STEEL SINK BOWLS, DRAINBOARDS, AND BACKSPLASH. FAUCET HOLES PUNCHED ON 8" CENTERS. BASKET-TYPE DRAINS WITH 1-1/2" OUTLET. 1"-DIAMETER CROSSBRACING. 1-5/8" O.D. GALVANIZED TUBULAR LEGS WITH ADJUSTABLE BULLET FEET.	4	3	3	FURNISH WITH 10"-LONG SWIVEL SPOUT FAUCET WITH 8" CENTER, EAGLE GROUP MODEL # 300489.
	WB-1	3	IPS Corporation	MIB1HAAB	WHITE POWDER COATED ICE MAKER OUTLET BOX WITH LEAD FREE HAMMER ARRESTER VALVES.		1.5		BRASS QUARTER TURN HAMMER ARRESTER VALVE, INSTALLED, 1/2" SWEAT CONX.
	WB-2	2	IPS Corporation	MWB13	CENTER DRAIN QUARTER TURN VALVES INSTALLED, 1/2" SWEAT CONNECTION	3	2.25	2.25	FURNISH WITH WATER HAMMER ARRESTOR
	WC-1	6	Zurn Industreis, LLC	Z5665-BWL-1	HET ELONGATED FLOOR MOUNTED, ADA HEIGHT EcoVantage FLUSH VALVE TOILET SYSTEM.	4	10		FURNISH WITH ZURN Z5955SS-EL TOILET SEAT AND SLOAN ROYAL MANUAL FLUSHOMETER, ROYAL 111-1.28-SF WITH BRUSHED STAINLESS STEEL FINISH.

DOMESTIC INDIRECT WATER HEATER SCHEDULE

	ID	Count	Manufacturer	Model	Description	Storage Capacity	Approximate Shipping Weight	Type Comments
	IWH-1	1	Bradford White	SW-80C-5	Commercial PowerStor Series® Single-Wall Indirect Water Heater	67.0 gal	300.00 lb	1" DOMESTIC WATER CONNECTIONS AND 1" HEATING HOT WATER SUPPLY AND RETURN CONNECTIONS.

DOMESTIC WATER HEATER NOTE - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN A.S.M.E. RATING IF THE FOLLOWING CRITERIA ARE MET FOR SAID WATER HEATER:

- HEAT INPUT OF 200,000 BTU/HR OR GREATER
- WATER TEMPERATURE OF 210 DEGREES FAHRENHEIT OR GREATER
- NOMINAL WATER CAPACITY OF 120 GALLONS OR GREATER

Re-Circulation Pump

	Type Mark	Manufacturer	Model	Motor Power	Voltage	Phase	Frequency	Type Comments
	WHP-1	Taco	008IQSF6-IFC	19 W	115 V	1	60 Hz	TACO SMARTPLUS DOMESTIC HOT WATER RECIRCULATION PUMP WITH AQUASTAT

SUMP PUMP SCHEDULE

	ID	Manufacturer	Model	Description	Design Capacity (GPM)	Design Head (FT)	Rated Full-Load Amps	Motor H.P.	Volts	Phase	Comments
	SP-1	STANCOR	SE40	OIL MINDER ELEVATOR SYSTEM	50	11	5.2	0.4	115	1	SEE NOTES BELOW

NOTES:

1. NEW 2'x2'x2' SUMP PIT IN ELEVATOR PIT (COORDINATE LOCATION WITH ARCHITECT). CONTRACTOR SHALL PROVIDE AND INSTALL STANCOR SE40 OILMINDER SUMP PUMP PER MANUFACTURERS RECOMMENDATIONS.
2. SEE 4/P6.01 FOR DETAIL.

SUMP PUMP CONTROL NOTES:

1. CONTRACTOR SHALL PROVIDE A MOTOR CONTROL PANEL CONTAINING ACROSS-THE-LINE ELECTRIC MOTOR STARTERS WITH AMBIENT COMPENSATED QUICK TRIP OVERLOADS IN EACH PHASE WITH MANUAL TRIP BUTTON AND RESET BUTTON, CIRCUIT BREAKER, CONTROL TRANSFORMER, ELECTRO-MECHANICAL ALTERNATOR, HAND-OFF-AUTOMATIC SELECTOR SWITCHES, PILOT LIGHTS, HIGH WATER ALARM PILOT LIGHT, RESET BUTTON AND ALARM HORN. FURNISH MERCURY SWITCH LIQUID LEVEL CONTROLS, STEEL SHELL SWITCH ENCASED IN POLYURETHANE FOAM WITH CAST IRON WEIGHT ON EACH PUMP. PUMP OFF/COMMON, AND ALARM. HIGH LEVEL ALARM SHALL BE TIED TO THE BUILDING AUTOMATION SYSTEM.
2. COORDINATE INSTALLATION WITH THE ELECTRICAL CONTRACTOR FOR PLACEMENT OF ALL CONTROL DEVICES, ALARMS AND MONITORS .

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1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088

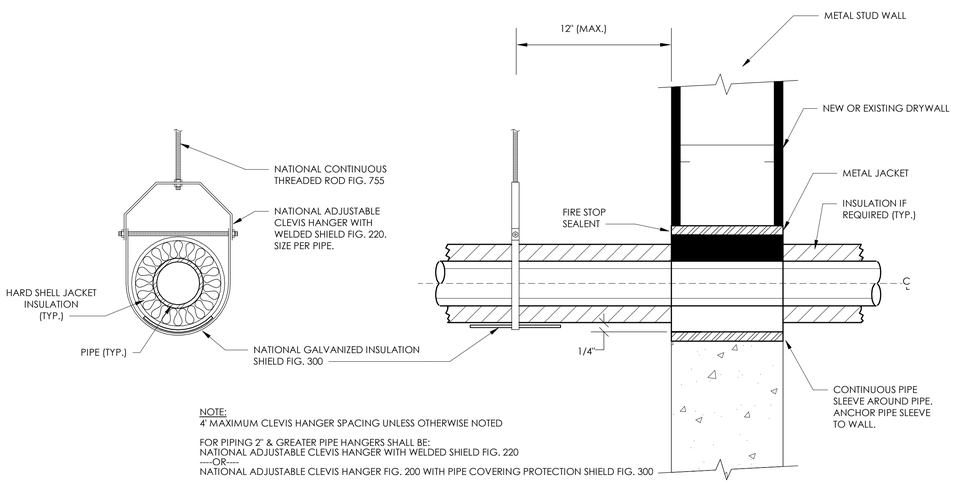
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

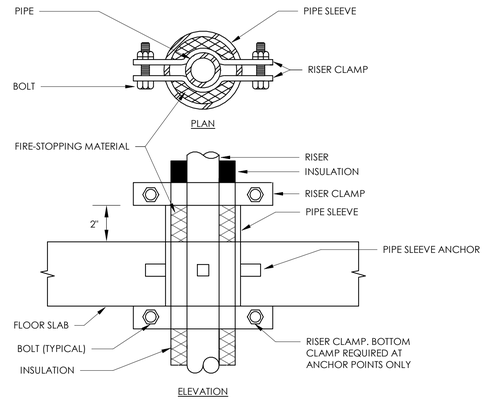
DRAWING TITLE: PLUMBING SCHEDULES

SHEET NUMBER: P6.01

8/24/2021 2:42:10 PM

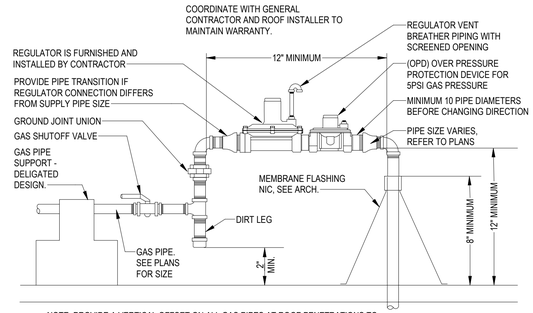


1 DETAIL - TYPICAL WALL PENETRATION & HANGER
NOT TO SCALE



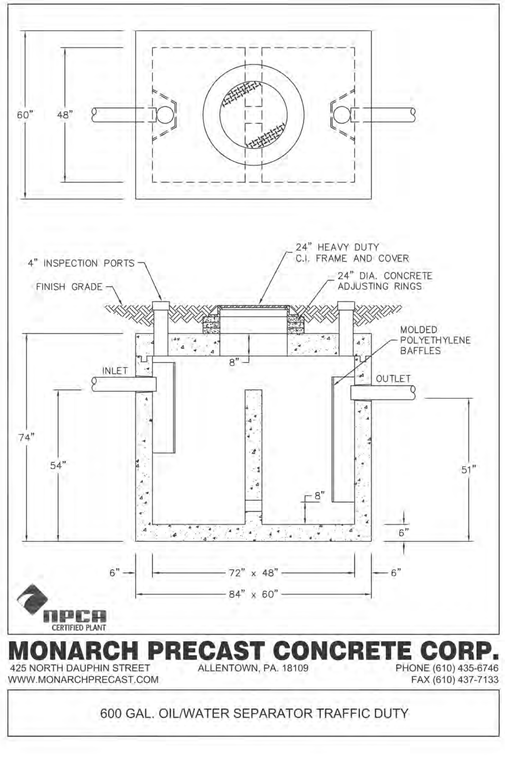
SUPPORT/ANCHOR FOR PIPE RISER
SCALE: NONE

2 DETAIL - SUPPORT / ANCHOR FOR PIPE RISER
NOT TO SCALE



NOTE: PROVIDE A VERTICAL OFFSET ON ALL GAS PIPES AT ROOF PENETRATIONS TO ALLOW FOR PROPER FLASHING BY OTHERS. SUPPORT PIPING OFFSETS AS REQUIRED.

3 DETAIL - GAS PIPE PENETRATION
NOT TO SCALE



MONARCH PRECAST CONCRETE CORP.
425 NORTH DAUPHIN STREET ALLENTOWN, PA. 18109 PHONE (610) 435-6746
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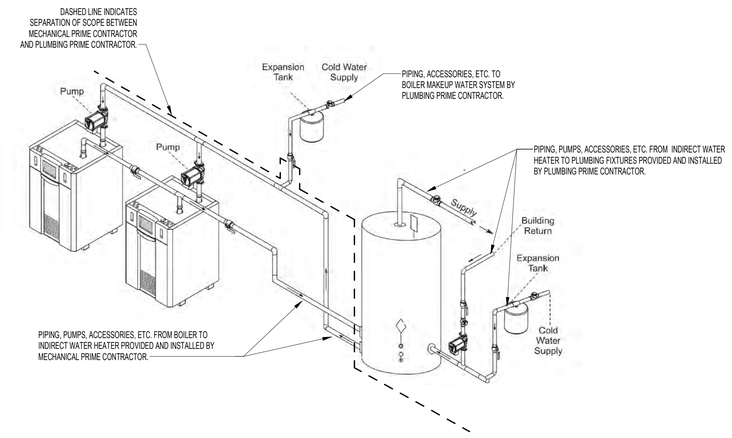
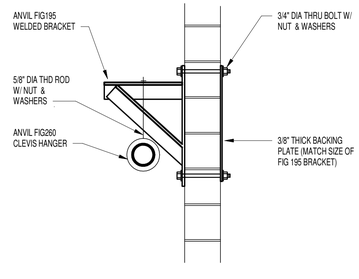
600 GAL. OIL/WATER SEPARATOR TRAFFIC DUTY

4 DETAIL - OIL/SAND INTERCEPTOR
NOT TO SCALE

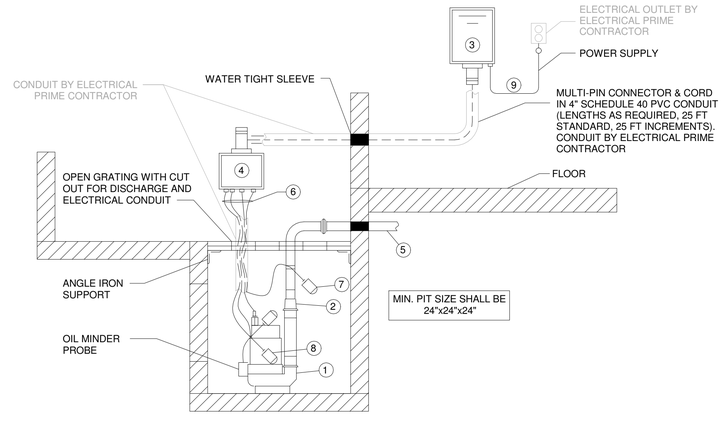


5 DETAIL - DOMESTIC INDIRECT WATER HEATER
NOT TO SCALE



*PLUMBING PRIME CONTRACTOR TO MODIFY PIPE SUPPORT AS REQUIRED FOR PROPER SEISMIC RESTRAINT.

7 DETAIL - GAS PIPE SUPPORT - MASONRY WALL
NOT TO SCALE



1. Stancor Model SE-40 submersible effluent pump .4 HP, 115 volt, 3600 RPM, 2" discharge connection
2. Check valve (2")
3. Stancor Oil-Minder 115V, 1Ø control system with built-in audible and visual alarm when pump does not run due to oil in pit or high liquid or high amperage condition. Provide silencing button for audible alarm built into panel. Panel shall have two contacts for a remote alarm location (one each for oil and high water or amperage alert). Junction box will be provided with multi-pin connector and cord in lengths as required, 25 ft. standard, optional 25 ft. increments.
4. Junction box will be provided with multi-pin connector and cord in lengths as required; 25 ft. is standard, optional 25 ft. increments available up to 250 ft.
5. All buried pump pressure discharge piping shall be protected with tapecoat CT corrosion protection tape.
6. Pump cable, probe cable, high liquid alarm cable, and pump "on" float cable (16 ft. lengths)
7. High liquid alarm float with clamp device to mount to pump discharge piping
8. Pump On float
9. Power cord and molded ground plug (6 ft. length)

ITEMS 1, 2, 3, 4, 6, 7, 8 AND 9 PROVIDED BY STANCOR AS A STANDARD PACKAGE

6 DETAIL - SUMP PUMP
NOT TO SCALE

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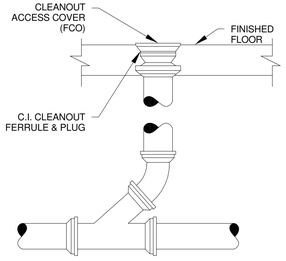
MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

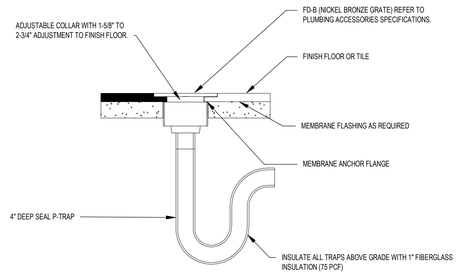
NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: PLUMBING DETAILS
SHEET NUMBER: P6.02

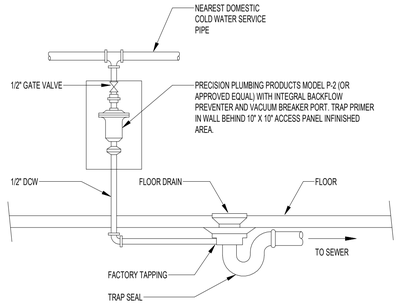
7/2/2021 3:50:10 PM



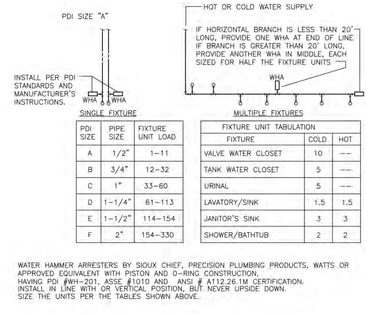
1 DETAIL - FLOOR CLEANOUT
NOT TO SCALE



2 DETAIL - FLOOR DRAIN
NOT TO SCALE



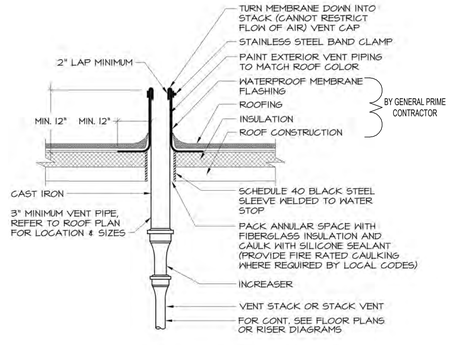
3 DETAIL - TRAP PRIMER
NOT TO SCALE



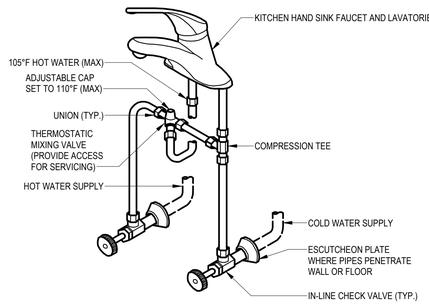
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1–11
B	3/4"	12–32
C	1"	33–60
D	1–1/4"	61–113
E	1–1/2"	114–154
F	2"	154–330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	––
TANK WATER CLOSET	5	––
URINAL	5	––
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

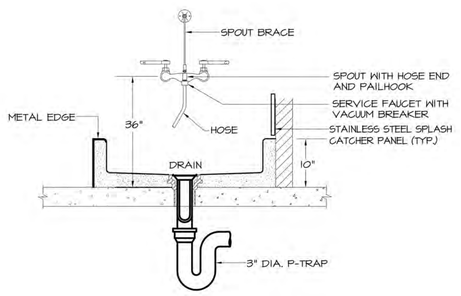
4 DETAIL - WATER HAMMER ARRESTOR
NOT TO SCALE



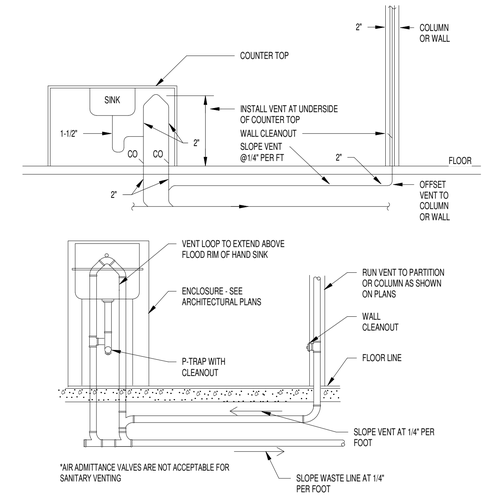
5 DETAIL - PLULMBING VENT THRU ROOF
NOT TO SCALE



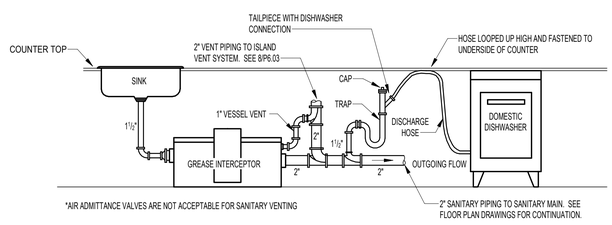
6 DETAIL - FAUCET
NOT TO SCALE



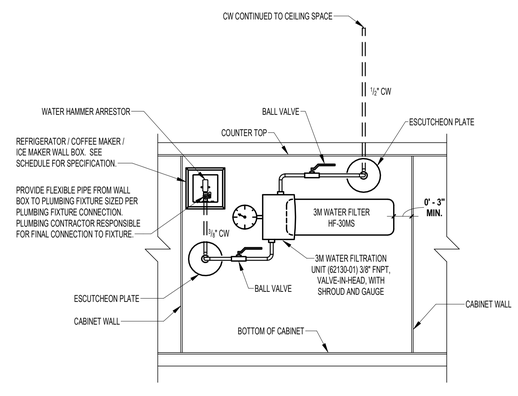
7 DETAIL - JANITOR SINK
NOT TO SCALE



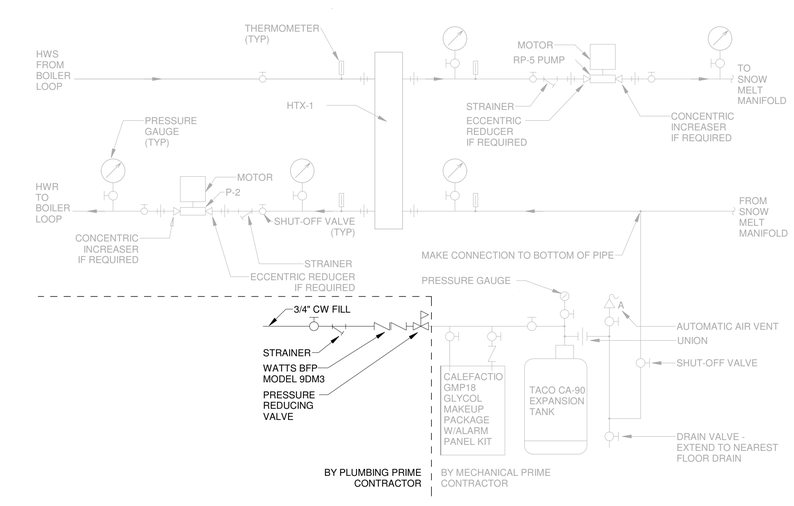
8 DETAIL - ISLAND VENT PIPING
NOT TO SCALE



9 DETAIL - DISHWASHER HOOKUP WITH GREASE INTERCEPTOR
NOT TO SCALE



10 DETAIL - REFRIDGERATOR WALL BOX
NOT TO SCALE



11 DETAIL - SNOW MELT GLYCOL FEEDER PIPING
NOT TO SCALE

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SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
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7/2/2021 3:50:13 PM

GENERAL MECHANICAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room / 1 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -10' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- PIPING BEING DEMOLISHED

FIRE PROTECTION SYMBOLS

- FP-D — FIRE PROTECTION DRY
- FP-O — FIRE PROTECTION OTHER
- FP-PA — FIRE PROTECTION PRE-ACTION
- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- UPRIGHT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD
- RECESSED SPRINKLER HEAD
- CONCEALED SPRINKLER HEAD
- 'D' REPRESENTS DRY SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
- 48x18 S/A — OBSTRUCTION FROM DUCTWORK 48" AND GREATER

ABBREVIATIONS

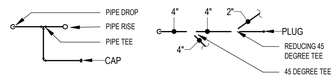
Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	MIA	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
AD	ACCESS DOOR	MBH	ONE THOUSAND BTU PER HOUR
ADD	ADDENDUM	MCF	ONE THOUSAND CUBIC FEET
AFF	ABOVE FINISHED FLOOR	MD	MOTORIZED DAMPER
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MECH	MECHANICAL
ALT	ALTERNATE	MFR	MANUFACTURER
AP	ACCESS PANEL	MIN	MINIMUM
ARCH	ARCHITECT/ARCHITECTURAL	MISC	MISCELLANEOUS
BFF	BELOW FINISHED FLOOR	MTR	MOTOR
BLW	BELOW	MUA	MAKE-UP/AIR
BTU	BRITISH THERMAL UNITS	NC	NOISE CRITERIA
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NORMALLY CLOSED
CAP	CAPACITY	NIC	NOT IN CONTRACT
CB	CATCH BASIN	NO	NUMBER
CFM	CUBIC FEET PER MINUTE	NO	NORMALLY OPEN
CLG	CEILING	NTS	NOT TO SCALE
CO	CLEAN OUT	O	OXYGEN
CW	COLD WATER	O/A	OUTSIDE AIR
D	DEGREE	ORD	OVERFLOW ROOF DRAIN
DB	DRY BULB	PD	PRESSURE DROP
DIA	DIAMETER	P/V	POST INDICATOR VALVE
DN	DOWN	PLBG	PLUMBING
DW	DISTILLED WATER	PRESS	PRESSURE
EA	EACH	PRV	PRESSURE REDUCING VALVE
EAT	ENTERING AIR TEMPERATURE	PSI	POUNDS PER SQUARE INCH
ELEC	ELECTRICAL	PSIG	POUNDS PER SQUARE INCH GAUGE
EQUIP	EQUIPMENT	PWR	POWER
EWC	ELECTRIC WATER COOLER	R	DUCT RISER
EWT	ENTERING WATER TEMPERATURE	R/A	RETURN AIR
E/A	EXHAUST AIR	RCP	RADIANT CEILING PANEL
EXIST	EXISTING	RD	ROOF DRAIN
F	DEGREES FAHRENHEIT	REC	RECESSED
FCO	FLOOR CLEAN OUT	RED	REDUCER
FD	FLOOR DRAIN	RH	RELATIVE HUMIDITY
FD	FIRE DAMPER	RLIA	RELIEF AIR
FDV	FIRE DEPARTMENT VALVE	RM	ROOM
FL	FLOOR	RPM	REVOLUTIONS PER MINUTE
FO	FUEL OIL	RW	RAIN WATER
FOV	FUEL OIL VENT	SF	SQUARE FOOT
FOR	FUEL OIL RETURN	S/A	SUPPLY AIR
FOS	FUEL OIL SUPPLY	SAN	SANITARY
FPM	FEET PER MINUTE	SF	SQUARE FOOT
FS	FLOOR SINK	SD	SMOKE DAMPER
FT	FOOT/FEET	SM	SURFACE MOUNT
FTR	FIN TUBE RADIATION	SP	STANDPIPE
GAL	GALLON	SP	STATIC PRESSURE
GC	GENERAL CONTRACTOR	STM	STEAM
GPM	GALLONS PER MINUTE	T	THERMOSTAT
GW	GREASE WASTE	TD	TEMPERATURE DROP
HB	HOSE BIB	TDR	TRENCH DRAIN
HP	HORSE POWER	TEMP	TEMPERATURE
HTG	HEATING	TYP	TYPICAL
HTR	HEATER	UG	UNDERGROUND
HW	HOT WATER	VAC	VACUUM
HYD	HYDRANT	V	VENT
ID	INDIRECT	VAV	VARIABLE AIR VOLUME
IN	INCH	VENT	VENTILATION
INV	INVERT	VTR	VENT THROUGH ROOF
LB	POUND	W	WASTE
LB/HR	POUNDS PER HOUR	WB	WET BULB
LAT	LEAVING AIR TEMPERATURE	WCO	WALL CLEAN OUT
LP	LOW PRESSURE	WH	WALL HYDRANT
LPG	LIQUEFIED PETROLEUM GAS		

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

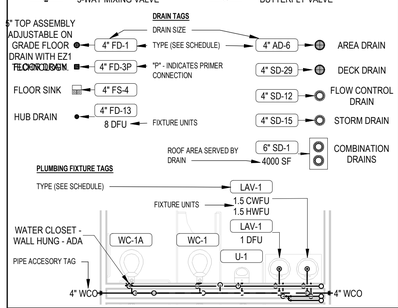
PLUMBING AND PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- NG — NATURAL GAS
- PG — PROPANE GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN
- CWV — COMBINATION WASTE & VENT
- CA — COMPRESSED AIR
- CW — DOMESTIC COLD WATER
- H-CW — HARD COLD WATER
- S-CW — SOFT COLD WATER
- F-CW — FILTERED COLD WATER
- RO — REVERSE OSMOSIS WATER
- HW — HOT WATER
- HW 140° — HOT WATER 140°
- HW-R — HOT WATER RECIRCULATION
- HW-R 140° — HOT WATER RECIRCULATION 140°
- GV — GREASE VENT
- GW — GREASE WASTE
- IW — INDIRECT WASTE
- OV — OIL VENT
- OW — OIL WASTE
- PD — PUMP DISCHARGE
- V — SANITARY VENT
- SS — SANITARY SEWER
- SHWR — SOLAR HOT WATER RETURN
- SHWS — SOLAR HOT WATER SUPPLY
- SD — STORM DRAINAGE
- OSD — OVERFLOW STORM DRAINAGE



PIPE ACCESSORY TAGS

- 2" DOM. WM — DOMESTIC WATER METER
- 2" BALANCING — BALANCING VALVE
- 2" SHUTOFF — 1/4 TURN BALL VALVE
- 2" CHECK — CHECK VALVE
- 2" TMV — 3-WAY MIXING VALVE
- 2" M-CNTRL — MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL — 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV — PRESSURE REDUCING VALVE
- 3/8" SOLENOID — REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY — BUTTERFLY VALVE



EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	EWH	ELECTRIC WATER HEATER
ACC	AIR COOLED CONDENSER	FCU	FAN COIL UNIT
ACCU	AIR COOLING CONDENSING UNIT	FP	FIRE PUMP
AHU	AIR HANDLING UNIT	GI	GREASE INTERCEPTOR
AS	AIR SEPARATOR	GRV	GRAVITY ROOF VENTILATOR
B	BOILER	HWP	HEATING WATER PUMP
CH	CHILLER	HX	HEAT EXCHANGER
CT	COOLING TOWER	HRU	HEAT RECOVERY UNIT
CUH	CABINET UNIT HEATER	PRV	POWER ROOF VENTILATOR
CWP	CONDENSER WATER PUMP	RE	RETURN/EXHAUST FAN
CHWP	CHILLED WATER PUMP	RTU	ROOFTOP UNIT
DBP	DOMESTIC WATER BOOSTER PUMP	SEP	SEWAGE EJECTOR PUMP
DC	DUCT MOUNTED COIL	SF	SUPPLY FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER
ET	EXPANSION TANK		

PROJECT GENERAL NOTES

- IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, DRAWINGS AND OTHER CONTRACT DOCUMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO ORDERING OR PROVIDING ANY MATERIALS OR LABOR. THE CONTRACTOR SHALL BID THE MOST STRINGENT REQUIREMENTS.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

FIRE PROTECTION GENERAL NOTES

- THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.
- DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.
- AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER.
- SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.
- THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

FIRE PROTECTION SHEET INDEX

SEISMIC & WIND REQUIREMENTS FOR MECHANICAL / PLUMBING SYSTEMS IBC / ASCE-7

THIS FIRE STATION IS ASSIGNED TO SEISMIC DESIGN CATEGORY C AND IS OCCUPANCY / RISK CATEGORY IV AS DEFINED BY CHAPTER 1 OF ASCE-7. ALL HVAC, PLUMBING & FIRE PROTECTION SYSTEMS AND EQUIPMENT ARE REQUIRED FOR THE CONTINUED OPERATION OF THE FIRE STATION AFTER AN EARTHQUAKE AND SHALL BE ASSIGNED A COMPONENT IMPORTANCE FACTOR OF 1.5 IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7.

A. PER SECTION 301.15 OF THE INTERNATIONAL MECHANICAL CODE, MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TORESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY.

B. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.

C. FOR ALL COMPONENTS REQUIRING SEISMIC AND/OR WIND RESTRAINT, THE MECHANICAL / PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS PREPARED IN ACCORDANCE WITH THE IBC AND ASCE 7 BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA WHO IS QUALIFIED TO DESIGN SEISMIC RESTRAINT SYSTEMS. SHOP DRAWINGS SHALL INCLUDE SEPARATE DETAILS AND CALCULATIONS FOR EACH SEPARATE SYSTEM, DEVICE, OR ELEMENT. THE APPROVAL OF SEISMIC BRACING SHOP DRAWINGS SHALL BE REQUIRED PRIOR TO THE INSTALLATION OF ANY BUILDING SYSTEMS OR COMPONENTS.

D. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.

E. SEISMIC RESTRAINTS FOR PIPING AND DUCTWORK MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED		RESTRAIN ALL - SEISMIC & WIND	-
FLOOR MOUNTED		RESTRAIN ALL	-
WALL MOUNTED		RESTRAIN ALL	-
COMPONENT SUPPORTS		RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	-
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>2"	4
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 2" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4
DUCTWORK		6 SQ.FT. AND LARGER	5
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 6)		REQUIRED	6

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, T HEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRE PROTECTION COVER SHEET

SHEET NUMBER: F0.00

7/2/2021 3:10:14 PM

FIRE SPRINKLER ROUGH PRESSURE BUDGET

DESIGN CRITERIA	
HAZARD CLASS	Ordinary Hazard 2
DESIGN DENSITY	0.2GPM/SF
DESIGN AREA	1500SF
QUICK RESPONSE SPRINKLERS? If so, enter Design Area percent reduction from NFPA 13 Fig 11.2.3.2.3.1	% reduction
INSIDE/OUTSIDE HOSE ALLOWANCE	250GPM
ADDITIONAL FLOW	192GPM DOMESTIC
SYSTEM INFORMATION	
MAX. AREA / SPRINKLER HEAD (NFPA-13 8.6.2.2)	130SF
# SPRINKLERS IN DESIGN AREA	12
FLOW ESTIMATE	
AVERAGE FLOW / SPRINKLER	29GPM
TOTAL SPRINKLER FLOW	348GPM
Overflow allowance	25%
TOTAL REQUIRED FLOW	**877GPM**
PRESSURE ESTIMATE	
SPRINKLER K FACTOR	5.6
REQ'D ORIFICE PRESSURE	27PSI
WHOLE BLDG SPRINKLER SYSTEM DEMAND	
REQ'D ORIFICE PRESSURE	27PSI
ELEVATION OF HIGHEST SPRINKLER ABOVE SUPPLY	37FT
BACKFLOW PREVENTER PRESSURE DROP	6PSI
PIPING LOSS FROM HYDRANT TO BLDG: TTL FLOW THRU 8" MAIN FOR ~50FT	0.5FT
PIPING LOSS FROM MAIN TO HEADS: 150FT MAIN 6" PIPE @264GPM +100GPM Inside Hose	1FT
PIPING LOSS FROM MAIN TO HEADS: 100FT MAIN 4"PIPE @264GPM +100GPM Inside Hose	3FT
PIPING LOSS FROM MAIN TO HEADS: 200FT MAIN 4" PIPE @264GPM	6FT
PIPING LOSS FROM MAIN TO HEADS: 100FT 2"BRANCH @25GPM	2FT
SAFETY FACTOR	10PSI
TOTAL REQUIRED PRESSURE	**65PSI**

HYDRANT # & LOCATION: 9th / Marion 2B Test DATE: 2/24/2021

TIME OF DAY: 1:50pm MIN. OF FLOW:

PURPOSE OF TEST: Sprinkler design criteria

DATA

FLOW HYDRANT(S) FH-67-1 A1 MONITOR HYDRANT(S) FH-67-2

SIZE OPENING: 2.5

COEFFICIENT: 0.9

PITOT READING: 64.7

GPM: **1350**

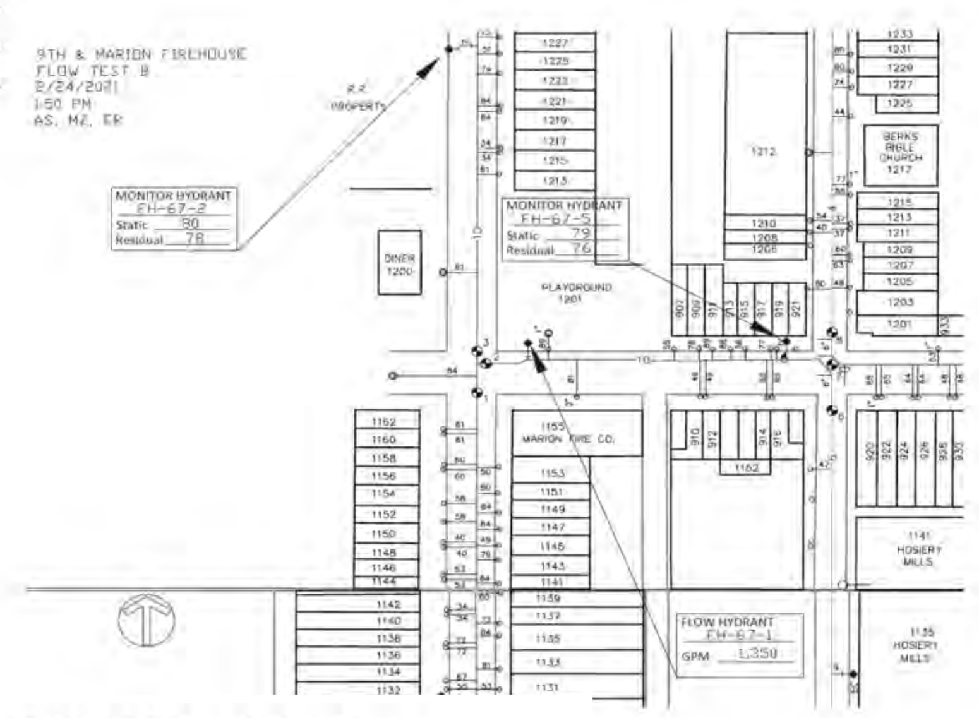
TOTAL FLOW DURING TEST: **1350** GPM

STATIC READING: 80 PSI RESIDUAL: 78 PSI

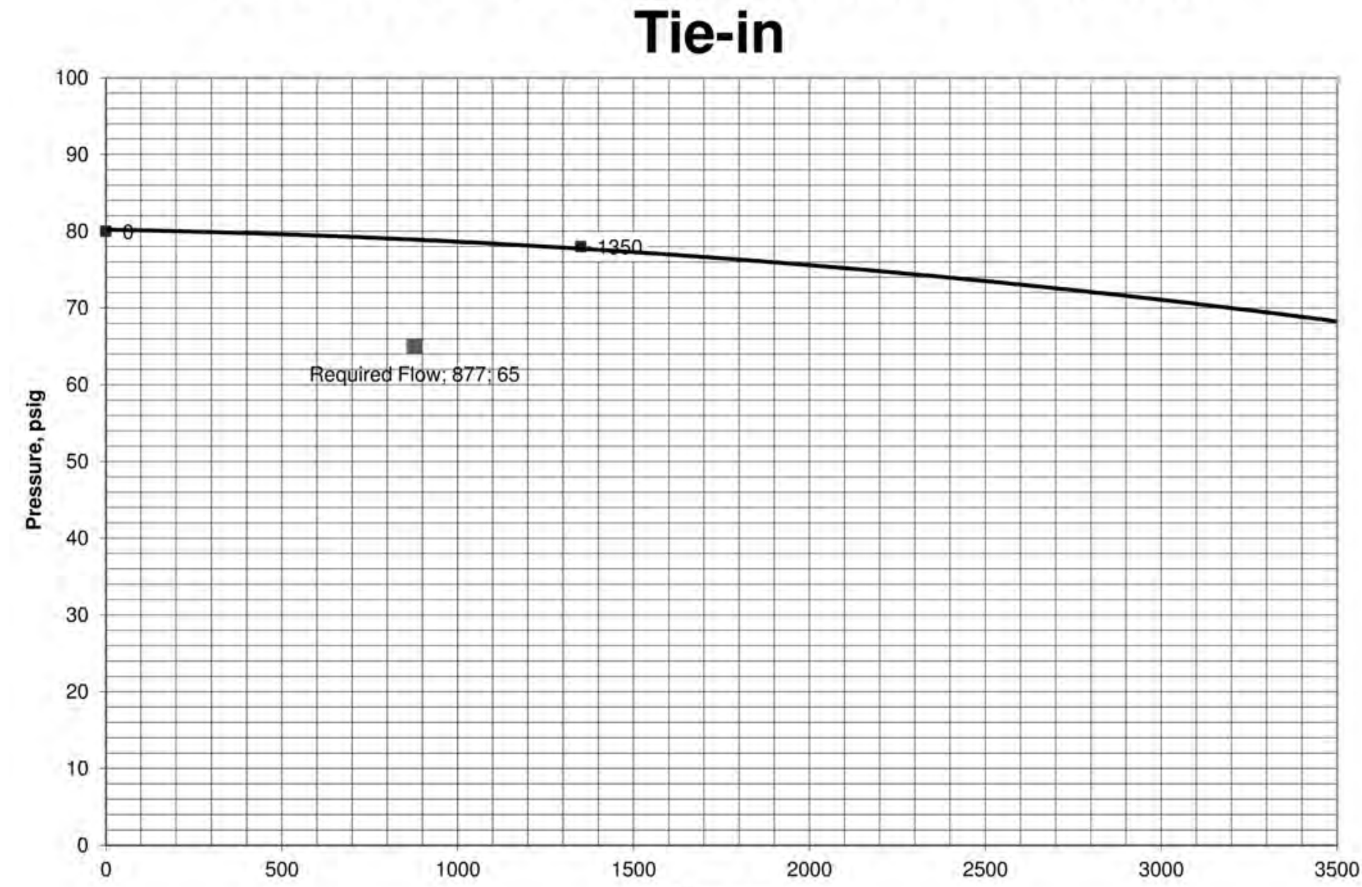
RESULTS: AT 20 PSI RESIDUAL **8470** GPM AT 0 PSI **9893** GPM

ESTIMATED CONSUMPTION: 1350 GAL.

REMARKS:

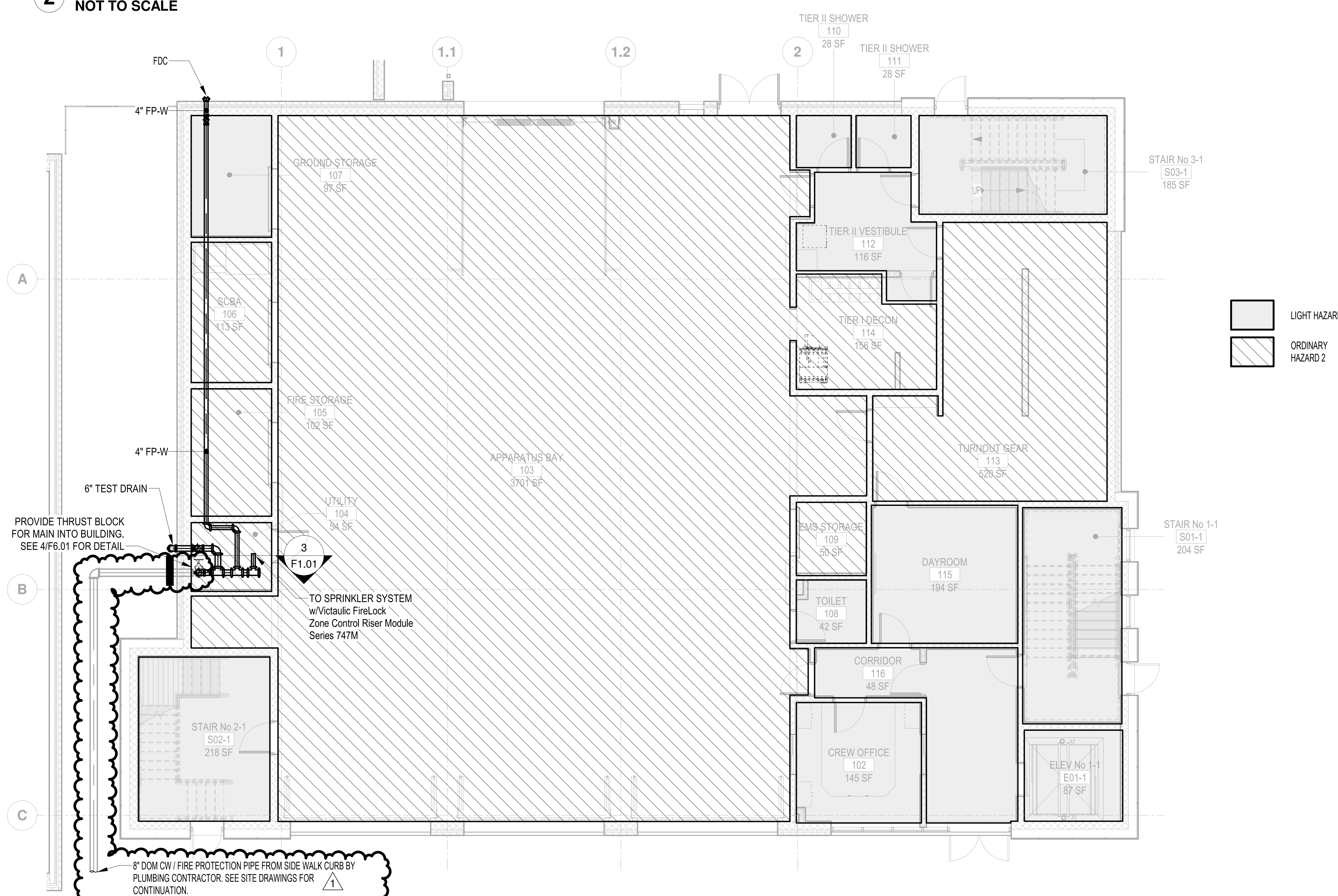


WATER FLOW TEST CHART - Marion Tie-in



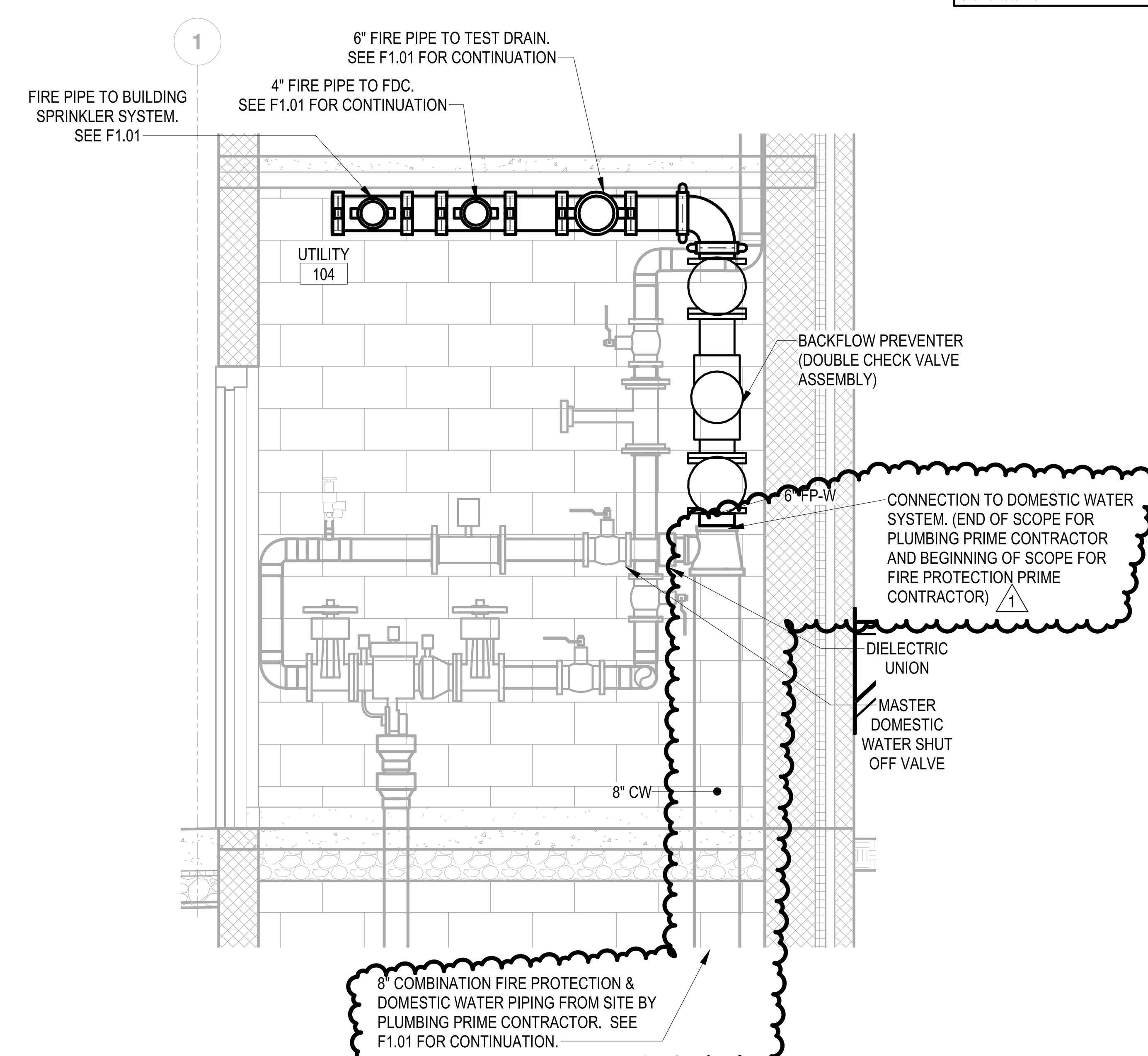
2 FIRE PROTECTION PRELIMINARY CALCULATIONS

NOT TO SCALE



1 FIRST FLOOR - FIRE PROTECTION - FLOOR PLAN

1/8" = 1'-0"



*HALFTONED PIPING BY PLUMBING PRIME CONTRACTOR. ALL OTHER PIPING IN VIEW SHALL BE THE RESPONSIBILITY OF THE FIRE PROTECTION PRIME CONTRACTOR.

3 FIRE PROTECTION ENTRY DETAIL

1/2" = 1'-0"

AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	701 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	7947 SF
OH1	ORDINARY HAZARD, GROUP 1 OCCUPANCY	0.15	0 SF
OH2	ORDINARY HAZARD, GROUP 2 OCCUPANCY	0.20	6315 SF
EH1	EXTRA HAZARD, GROUP 1 OCCUPANCY	0.30	0 SF
EH2	EXTRA HAZARD, GROUP 2 OCCUPANCY	0.40	0 SF
S	SPECIAL HAZARD OCCUPANCY		

OCCUPANCY HAZARD CLASSIFICATION SCHEDULE

LOCATION NO.	LOCATION NAME	AREA	OCCUPANCY HAZARD CLASSIFICATION SYMBOL
101	LOBBY	154 SF	LH
102	CREW OFFICE	145 SF	LH
103	APPARATUS BAY	3701 SF	OH2
104	UTILITY	54 SF	OH2
105	FIRE STORAGE	102 SF	OH2
106	SCBA	113 SF	OH2
107	GROUND STORAGE	97 SF	LH
108	TOILET	42 SF	LH
109	EMS STORAGE	50 SF	OH2
110	TIER II SHOWER	28 SF	LH
111	TIER II SHOWER	28 SF	LH
112	TIER II VESTIBULE	116 SF	LH
113	TURNOUT GEAR	520 SF	OH2
114	TIER I DECON	156 SF	OH2
115	DAYROOM	194 SF	LH
116	CORRIDOR	48 SF	LH
200.1	MECHANICAL/ TRAINING MEZZANINE	1173 SF	LH
200.2	POLE MEZZ	136 SF	OH2
200.3	STORAGE	293 SF	LH
201	CORRIDOR	269 SF	LH
202	STUDY	202 SF	LH
203	DAYROOM	549 SF	LH
204	KITCHEN/DINING	850 SF	LH
205	JAN	14 SF	LH
206	T&S	78 SF	LH
207	CORRIDOR	173 SF	OH2
208	T&S	79 SF	LH
209	T&S	79 SF	LH
210	POLE	30 SF	LH
211	CORRIDOR	405 SF	OH2
212	BUNK	120 SF	LH
213	BUNK	117 SF	LH
214	BUNK	117 SF	LH
215	BUNK	117 SF	LH
216	BUNK	117 SF	LH
217	BUNK	112 SF	LH
218	COURTYARD	728 SF	OH2
219.1	POLE	88 SF	LH
219.2	POLE	45 SF	LH
220	LAUNDRY/ JAN	48 SF	OH2
222	BUNK	87 SF	LH
223	T&S	103 SF	LH
224	BATTALION OFFICE	139 SF	LH
225	CORRIDOR	204 SF	OH2
226	CONFERENCE	216 SF	LH
227	IT	33 SF	LH
228	TOILET	48 SF	LH
229	ELEC	38 SF	LH
230	FITNESS	390 SF	LH
E01-1	ELEV No 1-1	87 SF	LH
E01-2	ELEV No 1-2	87 SF	LH
S01-1	STAIR No 1-1	204 SF	LH
S01-2	STAIR No 1-2	212 SF	LH
S01-3	STAIR No 1-3	212 SF	LH
S02-1	STAIR No 2-1	218 SF	LH
S02-2	STAIR No 2-2	220 SF	LH
S02-3	STAIR No 2-3	220 SF	LH
S03-1	STAIR No 3-1	185 SF	LH
S03-2	STAIR No 3-2	188 SF	LH
S03-3	STAIR No 3-3	188 SF	LH
S04	ROOF STAIR	57 SF	LH
Grand total: 61		14826 SF	

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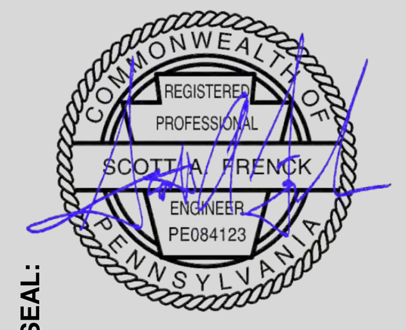

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CONSULTANT: DEDC LLC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088

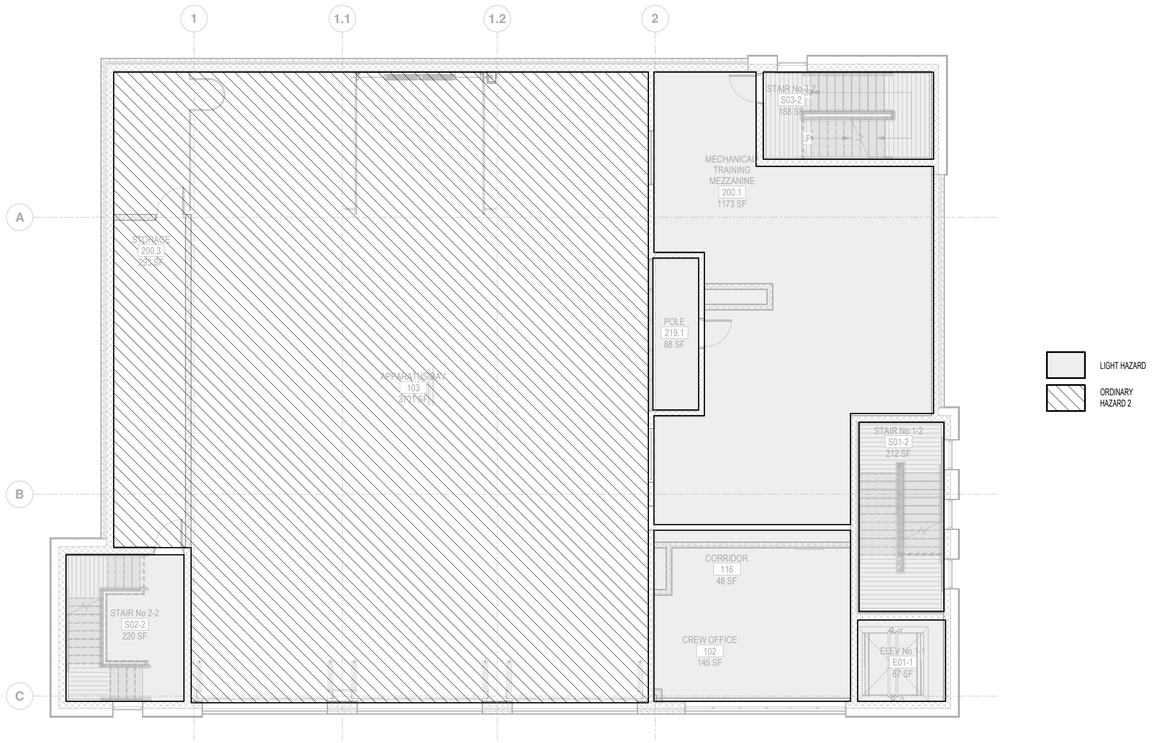
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR FIRE PROTECTION PLAN

SHEET NUMBER: F1.01

8/25/2021 12:50:32 PM



1 MEZZANINE - FIRE PROTECTION - FLOOR PLAN

1/8" = 1'-0"

0 8' 16' 32'

P T

AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	701 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	7947 SF
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OCCUPANCY HAZARD CLASSIFICATION SCHEDULE

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205	JAN	14 SF	LH
206	T&S	78 SF	LH
207	CORRIDOR	173 SF	OH2
208	T&S	79 SF	LH
209	T&S	79 SF	LH
210	POLE	30 SF	LH
211	CORRIDOR	405 SF	OH2
212	BUNK	120 SF	LH
213	BUNK	117 SF	LH
214	BUNK	117 SF	LH
215	BUNK	117 SF	LH
216	BUNK	117 SF	LH
217	BUNK	112 SF	LH
218	COURTYARD	728 SF	OH2
219.1	POLE	88 SF	LH
219.2	POLE	45 SF	LH
220	LAUNDRY/ JAN	48 SF	OH2
222	BUNK	87 SF	LH
223	T&S	103 SF	LH
224	BATTALION OFFICE	139 SF	LH
225	CORRIDOR	204 SF	OH2
226	CONFERENCE	216 SF	LH
227	IT	33 SF	LH
228	TOILET	48 SF	LH
229	ELEC	38 SF	LH
230	FITNESS	390 SF	LH
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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

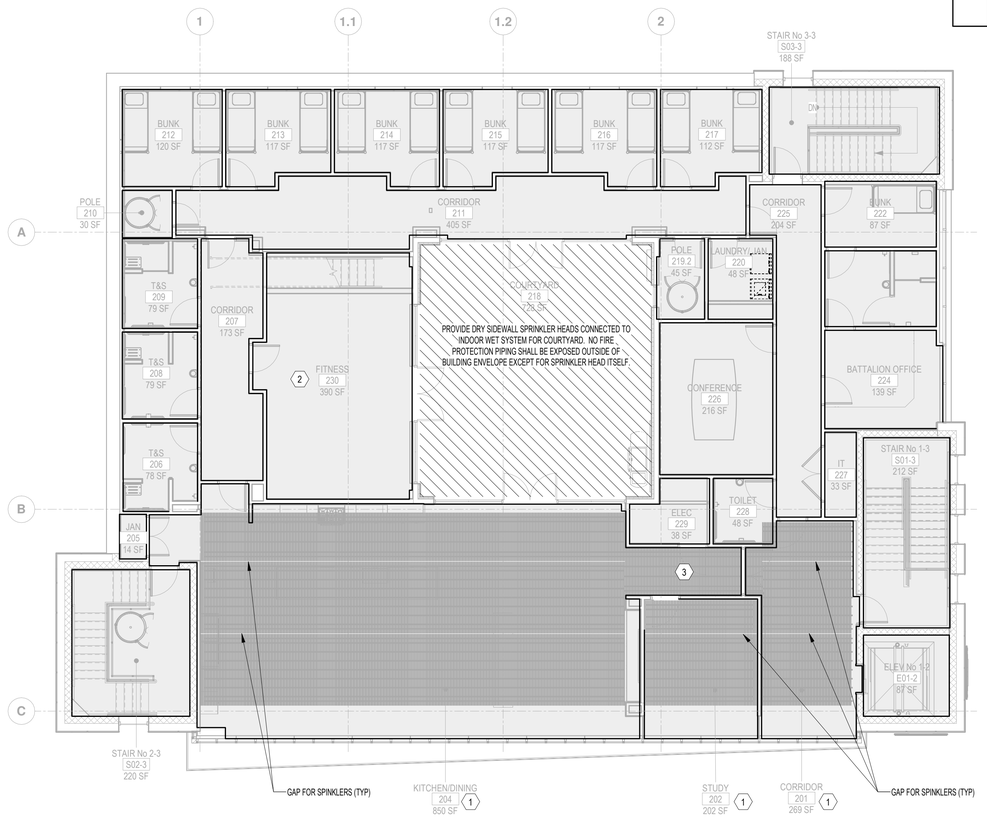
MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE FIRE PROTECTION PLAN
SHEET NUMBER: F1.02

7/2/2021 3:10:23 PM



1 SECOND FLOOR - FIRE PROTECTION - FLOOR PLAN

1/8" = 1'-0"

0 8' 16' 32'

KEYNOTES

Keynote Number	Keynote Description
1	WOOD SLAT ARCHITECTURAL CEILING IN THIS AREA. SPRINKLERS REQ'D AT CEILING LEVEL AND IN PLENUM ABOVE. FP CONTRACTOR TO USE EXTENDED COVERAGE CONCEALED SPRINKLER HEADS IN 2' GAPS SHOWN ON PLANS. COORDINATE LOCATIONS WITH ARCHITECT. PAINTED AND/OR POWDER COATED SPRINKLER COVERS (COLOR BY ARCHITECT) REQ'D. ALL SPRINKLER PIPING ABOVE CEILING TO BE PAINTED BLACK (BY OTHERS).
2	NO CEILING THIS AREA. SPRINKLER HEADS TO BE LOCATED AS HIGH AS POSSIBLE IN FITNESS ROOM TO PREVENT ACCIDENTAL CONTACT BY FITNESS ROOM OCCUPANTS.
3	WOOD SLAT ARCHITECTURAL CEILING IN THIS AREA. SPRINKLERS REQ'D AT CEILING LEVEL AND IN PLENUM ABOVE. FP CONTRACTOR TO USE EXTENDED COVERAGE CONCEALED SPRINKLER HEAD CENTERED IN CORRIDOR. WOOD SLAT CEILING WILL BE MODIFIED IN THIS LOCATION BY THE GENERAL CONTRACTOR (CIRCULAR CUTOUT) - COORDINATE LOCATION WITH ARCHITECT. PAINTED AND/OR POWDER COATED SPRINKLER COVERS (COLOR BY ARCHITECT) REQ'D. ALL SPRINKLER PIPING ABOVE CEILING TO BE PAINTED BLACK (BY OTHERS).

AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

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202	STUDY	202 SF	LH
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204	KITCHEN/DINING	850 SF	LH
205	JAN	14 SF	LH
206	T&S	78 SF	LH
207	CORRIDOR	173 SF	OH2
208	T&S	79 SF	LH
209	T&S	79 SF	LH
210	POLE	30 SF	LH
211	CORRIDOR	405 SF	OH2
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213	BUNK	117 SF	LH
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216	BUNK	117 SF	LH
217	BUNK	112 SF	LH
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Grand total: 61		14826 SF	

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

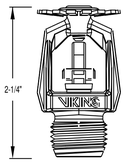
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR FIRE PROTECTION PLAN

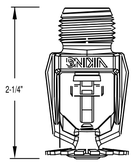
SHEET NUMBER: F1.03

7/2/2021 3:10:28 PM



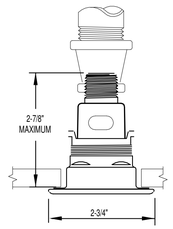
VIKING QUICK RESPONSE SERIES VK300, K=5.6, 1/2" NPT, UPRIGHT, BRONZE FINISH.

NO SCALE



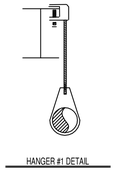
VIKING QUICK RESPONSE SERIES VK302, K=5.6, 1/2" NPT, PENDENT &
VIKING SERIES VK352, K=8.0, 3/4" NPT, PENDENT, BRONZE FINISH

NO SCALE



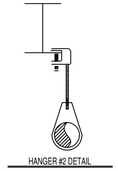
VIKING QUICK RESPONSE SERIES VK462, K=5.6, 1/2" NPT, CONCEALED WITH WHITE COVER PLATE.

NO SCALE



HANGER #1 DETAIL

1 -- ALL THREAD ROD
1 -- RING
1 -- UNIVERSAL TOP BEAM CLAMP

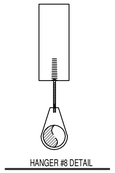


HANGER #2 DETAIL

1 -- ALL THREAD ROD
1 -- RING
1 -- UNIVERSAL TOP BEAM CLAMP

HANGER #4 DETAIL

1 -- ALL THREAD ROD
1 -- RING
1 -- CONCRETE DROP-IN



HANGER #6 DETAIL

1 -- THUNDERBOLT
1 -- ROD
1 -- RING

Protection Areas and Maximum Spacing
(Standard Spray Upright/Standard Spray Pendent)

CONSTRUCTION TYPE	LIGHT HAZARD		ORDINARY HAZARD		EXTRA HAZARD		HIGH-PILED HAZARD	
	Protection Area ft²	Spacing (max.) ft	Protection Area ft²	Spacing (max.) ft	Protection Area ft²	Spacing (max.) ft	Protection Area ft²	Spacing (max.) ft
Noncombustible obstructed and unobstructed and combustible unobstructed	225	15	130	15	100	12	100	12
Combustible obstructed	168	15	130	15	100	12	100	12
Note: For hydraulically calculated systems only.								

MAXIMUM DISTANCE BETWEEN HANGERS

NOMINAL PIPE SIZE (in.)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A

SPRINKLER NOTES:

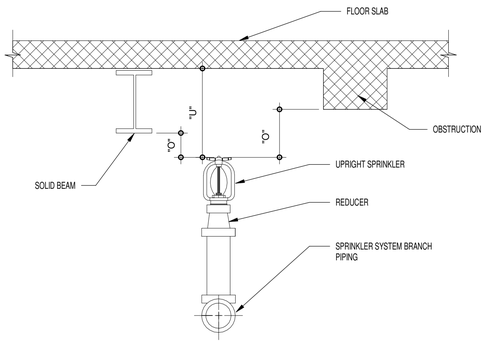
1. ALL PIPE TO BE SCHEDULE 40 BLACK STEEL PIPE MEETING OR EXCEEDING ASTM A-135 REQUIREMENTS.

2. ALL SCREW FITTINGS TO BE CAST IRON AND OR MALLEABLE IRON MEETING OR EXCEEDING ANSI B16.4 AND ANSI B16.3.

3. ALL GROOVED FITTINGS TO BE MALLEABLE IRON MEETING OR EXCEEDING ASTM A-536 REQUIREMENTS.

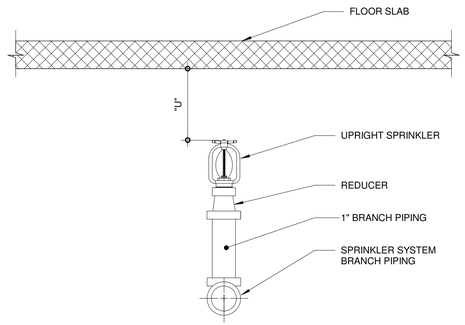
4. ALL HANGERS TO MEET OR EXCEED NFPA PAMPHLET REQUIREMENTS.

1 SPRINKLER & HANGER DETAILS
NOT TO SCALE



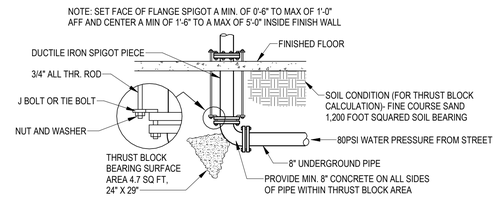
NOTES:
1. "O" SPRINKLER DEFLECTOR SHALL BE LOCATED 1" MINIMUM AND 6" MAXIMUM BELOW OBSTRUCTION.
2. "U" SPRINKLER DEFLECTOR SHALL BE LOCATED 1" MINIMUM AND 22" MAXIMUM BELOW UNDERSIDE OF SLAB.

2 SPRINKLER HEAD OBSTRUCTION DETAIL
NOT TO SCALE



NOTES:
1. "U" SPRINKLER DEFLECTOR SHALL BE LOCATED 1" MINIMUM AND 12" MAXIMUM BELOW UNDERSIDE OF SLAB

3 SPRINKLER HEAD UNOBSTRUCTED DETAIL
NOT TO SCALE



4 DETAIL - WATER MAIN RESTRAINT
NOT TO SCALE

MW STUDIOS
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SEAL:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT A. FRENCK
ENGINEER
PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123
EXP DATE: 9-30-21

CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: FIRE PROTECTION DETAIL SHEET
SHEET NUMBER: F6.01

7/2/2021 3:10:30 PM

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
$	20A, 120-277V AC, SINGLE POLE TOGGLE SWITCH. MH = 48" A.F.F. AS MEASURED TO BOTTOM OF DEVICE BOX.
$3	20A, 120-277V AC, THREE WAY TOGGLE SWITCH. MH = 48" A.F.F. AS MEASURED TO BOTTOM OF DEVICE BOX.
$4	20A, 120-277V AC, FOUR WAY TOGGLE SWITCH. MH = 48" A.F.F. AS MEASURED TO BOTTOM OF DEVICE BOX.
$D	20A, 120V-277V AC, 0-10V DIMMING WALL SWITCH AS MANUFACTURED BY WATTSTOPPER MODEL#LMSW-101. E.C. TO INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS. COLOR AS SELECTED BY ARCHITECT.
$DD	24V DC, SINGLE BUTTON DIGITAL DIMMING WALL SWITCH, SWITCH MOUNTING HEIGHT = 48" A.F.F. TO THE TOP OF DEVICE BOX, U.O.N.. SWITCH SHALL BE MODEL NUMBER LMDM-101 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. DIGITAL WALL SWITCH SHALL BE FED BY DIGITAL ROOM CONTROLLER. CABLING BETWEEN CONTROLLER AND DIGITAL WALL SWITCH SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS. COLOR AS SELECTED BY ARCHITECT.
$OC1	20A, 120-277V AC, SINGLE BUTTON WALL MOUNT, PASSIVE INFRARED SINGLE RELAY ON/OFF OCCUPANCY SENSOR. SWITCH MOUNTING HEIGHT = 48" A.F.F. TO CENTER OF DEVICE BOX, U.O.N. OCCUPANCY SWITCH SHALL BE #PW-101 AS MANUFACTURED BY WATTSTOPPER.
$OC2	20A, 120-277V AC, TWO BUTTON WALL MOUNT, DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC), DUAL RELAY OCCUPANCY SENSOR. SWITCH MOUNTING HEIGHT = 48" A.F.F. TO CENTER OF DEVICE BOX, U.O.N. OCCUPANCY SWITCH SHALL BE #DW-200 AS MANUFACTURED BY WATTSTOPPER.
$OC3	20A, 120-277V AC, SINGLE BUTTON 0-10V DIMMING WALL MOUNT, PASSIVE INFRARED, SINGLE RELAY OCCUPANCY SENSOR. SWITCH MOUNTING HEIGHT = 48" A.F.F. TO CENTER OF DEVICE BOX, U.O.N. OCCUPANCY SWITCH SHALL BE #PW-311 AS MANUFACTURED BY WATTSTOPPER.
$D10	20A, 120-277VAC, 0-10V DIMMING SWITCH AS MANUFACTURED BY WATTSTOPPER MODEL# RH4FBL3PTC. E.C. TO INSTALL PER MANUFACTURERS INSTRUCTIONS. COLOR TO BE SELECTED BY ARHCITECT.
$FC	20A, 120-277VAC, FAN CONTROLLER WALL BOX AS MANUFACTURED BY WATTSTOPPER MODEL# CDSC6-X. E.C. TO INSTALL PER MANUFACTURERS INSTRUCTIONS. COLOR TO BE SELECTED BY ARCHITECT.
$CC	20A, 120-277VAC, RGBW LED LIGHTING CONTROLLER, COLORDIAL PRO AS MANUFACTURED BY COLOR KINETICS OR EQUAL. E.C. SHALL FURNISH AND INSTALL CONTROLLER AND WIRING TO ALL DEVICES.
OC	1000 SQ. FT. COVERAGE CEILING MOUNTED OCCUPANCY SENSOR., 24V DC, DUAL TECHNOLOGY (ULTRASONIC AND PASSIVE INFRARED). SENSOR SHALL BE MODEL NUMBER LMDC-100 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. FINISH SHALL BE SELECTED BY OWNER/ARCHITECT. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER. CABLING BETWEEN CONTROLLER AND OCCUPANCY SENSOR SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS.
OC2	1000 SQ. FT. COVERAGE CEILING MOUNTED EXTENDED RANGE OCCUPANCY SENSOR., 24V DC, PASSIVE INFRARED. SENSOR SHALL BE MODEL NUMBER LMPC-100 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. FINISH SHALL BE SELECTED BY OWNER/ARCHITECT. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER. CABLING BETWEEN CONTROLLER AND OCCUPANCY SENSOR SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS.
OS	1000 SQ. FT. COVERAGE WALL MOUNTED OCCUPANCY SENSOR., 24V DC, PIR TECHNOLOGY (PASSIVE INFRARED). SENSOR SHALL BE MODEL NUMBER LMPX-100 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER. CABLING BETWEEN CONTROLLER AND OCCUPANCY SENSOR SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS.
DH	WALL MOUNTED DAYLIGHT HARVESTING DIGITAL CLOSED LOOP SINGLE ZONE PHOTOCELL, 24V DC. SENSOR SHALL BE MODEL NUMBER LMLS-400 WITH WALL MOUNT BRACKET #LMLS-MB2 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. PHOTOCELL SHALL BE FED FROM DIGITAL ROOM CONTROLLER. CABLING BETWEEN CONTROLLER AND PHOTOCELL SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS.
RC1	20A, 120V AC, 60HZ, ON/OFF DIGITAL ROOM CONTROLLER, SINGLE RELAY, UL LISTED, U.O.N. SWITCH SHALL BE MODEL NUMBER LMRC-101 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. CABLING BETWEEN LOW VOLTAGE DEVICES AND DIGITAL ROOM CONTROLLER SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS. E.C. SHALL MOUNT DIGITAL ROOM CONTROLLER SECURELY ABOVE DROP CEILING IN ACCESSIBLE SPACE. ROOM CONTROLLER'S CONTROLLING LIGHTING FED FROM EMERGENCY CIRCUITS SHALL BE PROVIDED WITH AN EMERGENCY BYPASS CONTROLLER. . EMERGENCY BYPASS CONTROLLER SHALL BE MANUFACTURED BY WATTSTOPPER, MODEL ELCU-200. E.C. SHALL PROVIDE (1) ONE DIGITAL WIRELESS CONFIGURATION TOOL AS MANUFACTURED BY WATTSTOPPER, MODEL LMCT-100. THE DIGITAL CONFIGURATION TOOL SHALL BE USED TO PROGRAM THE DIGITAL ROOM CONTROLLERS.
RCD1	20A, 120V AC, 60HZ, ON/OFF/0-10V DIMMING DIGITAL ROOM CONTROLLER, SINGLE RELAY, UL LISTED, U.O.N. SWITCH SHALL BE MODEL NUMBER LMRC-211 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. CABLING BETWEEN LOW VOLTAGE DEVICES AND DIGITAL ROOM CONTROLLER SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS. E.C. SHALL MOUNT DIGITAL ROOM CONTROLLER SECURELY ABOVE DROP CEILING IN ACCESSIBLE SPACE. ROOM CONTROLLER'S CONTROLLING LIGHTING FED FROM EMERGENCY CIRCUITS SHALL BE PROVIDED WITH AN EMERGENCY BYPASS CONTROLLER. EMERGENCY BYPASS CONTROLLER SHALL BE MANUFACTURED BY WATTSTOPPER, MODEL ELCU-200. E.C. SHALL PROVIDE (1) ONE DIGITAL WIRELESS CONFIGURATION TOOL AS MANUFACTURED BY WATTSTOPPER, MODEL LMCT-100. THE DIGITAL CONFIGURATION TOOL SHALL BE USED TO PROGRAM THE DIGITAL ROOM CONTROLLERS.
RCD2	20A, 120V AC, 60HZ, ON/OFF/0-10V DIMMING DIGITAL ROOM CONTROLLER, DUAL RELAY, UL LISTED, U.O.N. SWITCH SHALL BE MODEL NUMBER LMRC-212 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. CABLING BETWEEN LOW VOLTAGE DEVICES AND DIGITAL ROOM CONTROLLER SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS. E.C. SHALL MOUNT DIGITAL ROOM CONTROLLER SECURELY ABOVE DROP CEILING IN ACCESSIBLE SPACE. ROOM CONTROLLER'S CONTROLLING LIGHTING FED FROM EMERGENCY CIRCUITS SHALL BE PROVIDED WITH AN EMERGENCY BYPASS CONTROLLER. EMERGENCY BYPASS CONTROLLER SHALL BE MANUFACTURED BY WATTSTOPPER, MODEL ELCU-200. E.C. SHALL PROVIDE (1) ONE DIGITAL WIRELESS CONFIGURATION TOOL AS MANUFACTURED BY WATTSTOPPER, MODEL LMCT-100. THE DIGITAL CONFIGURATION TOOL SHALL BE USED TO PROGRAM THE DIGITAL ROOM CONTROLLERS.
RCD3	20A, 120V AC, 60HZ, ON/OFF/0-10V DIMMING DIGITAL ROOM CONTROLLER, TRIPLE RELAY, UL LISTED, U.O.N. SWITCH SHALL BE MODEL NUMBER LMRC-213 AS MANUFACTURED BY WATTSTOPPER OR EQUAL. CABLING BETWEEN LOW VOLTAGE DEVICES AND DIGITAL ROOM CONTROLLER SHALL BE CAT-5E CABLE WITH RJ45 CONNECTORS. E.C. SHALL MOUNT DIGITAL ROOM CONTROLLER SECURELY ABOVE DROP CEILING IN ACCESSIBLE SPACE. ROOM CONTROLLER'S CONTROLLING LIGHTING FED FROM EMERGENCY CIRCUITS SHALL BE PROVIDED WITH AN EMERGENCY BYPASS CONTROLLER. EMERGENCY BYPASS CONTROLLER SHALL BE MANUFACTURED BY WATTSTOPPER, MODEL ELCU-200. E.C. SHALL PROVIDE (1) ONE DIGITAL WIRELESS CONFIGURATION TOOL AS MANUFACTURED BY WATTSTOPPER, MODEL LMCT-100. THE DIGITAL CONFIGURATION TOOL SHALL BE USED TO PROGRAM THE DIGITAL ROOM CONTROLLERS. WP = WATERPROOF PROTECTIVE COVER.

SYMBOL	DESCRIPTION
	3 BUTTON OVERHEAD DOOR CONTROLLER
	20A, 120V AC, NEMA 5-20R, DUPLEX RECEPTACLE, SINGLE GANG BOX, TILE RING (DEPTH AS REQUIRED), COVERPLATE. MOUNTING HEIGHT TO CENTER OF DEVICE = 18" AFF TO CENTER OF DEVICE BOX, U.O.N., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), T = TAMPER PROOF
GFI	20A, 120V AC, NEMA 5-20R, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE (GFI), SINGLE GANG BOX, TILE RING (DEPTH AS REQUIRED). MOUNTING HEIGHT TO CENTER OF DEVICE = 18" A.F.F., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), WP = IN USE WEATHERPROOF COVER.
ISO	20A, 120V AC, NEMA 5-20R, DUPLEX RECEPTACLE, SINGLE GANG BOX, TILE RING (DEPTH AS REQUIRED). MOUNTING HEIGHT TO CENTER OF DEVICE = 18" A.F.F., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), ISO = GASKETED STAINLESS STEEL COVERPLATE.
48" GFI ISO	20A, 120V AC, NEMA 5-20R, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE (GFI), SINGLE GANG BOX, TILE RING (DEPTH AS REQUIRED). MOUNTING HEIGHT TO CENTER OF DEVICE = 48" A.F.F, ISO = GASKETED STAINLESS STEEL COVERPLATE
S	20A, 120V AC, NEMA 5-20R, SURFACE MOUNTED DUPLEX RECEPTACLE, 4" SQUARE BOX, CONDUIT STUBBED UP TO EASILY ACCESSIBLE SPACE ABOVE CEILING. MOUNTING HEIGHT TO CENTER OF DEVICE = 18" AFF TO CENTER OF DEVICE BOX, U.O.N., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK).
U	20A, 120V AC, NEMA 5-20R, DUPLEX RECEPTACLE WITH 3.1 AMP USB CHARGING PORT. MOUNTING HEIGHT TO CENTER OF DEVICE = 18" AFF TO CENTER OF DEVICE BOX, U.O.N., X"= INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK).
	20A, 120V AC, NEMA 5-20R, DOUBLE DUPLEX RECEPTACLE, DOUBLE GANG BOX, TILE RING (DEPTH AS REQUIRED). MOUNTING HEIGHT TO CENTER OF DEVICE = 18" A.F.F., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), T = TAMPER PROOF, ISO = GASKETED STAINLESS STEEL COVERPLATE
GFI WP	20A, 120V AC, NEMA 5-20R, GROUND FAULT CIRCUIT INTERRUPTER (GFI) TYPE DOUBLE DUPLEX RECEPTACLE, DOUBLE GANG BOX, TILE RING (DEPTH AS REQUIRED). MOUNTING HEIGHT TO CENTER OF DEVICE = 18" A.F.F., X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), T = TAMPER PROOF WP = IDENTIFIES "IN USE" WEATHERPROOF COVER.
48" S ISO	20A, 120V AC, NEMA 5-20R, SURFACE MOUNTED DOUBLE DUPLEX RECEPTACLE, CONDUIT STUBBED UP TO EASILY ACCESSIBLE SPACE ABOVE CEILING, GASKETED. X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK), PROOF WP = IDENTIFIES "IN USE" WEATHERPROOF COVER, ISO = GASKETED STAINLESS STEEL COVERPLATE
XX-XXR	SPECIAL PURPOSE ELECTRICAL RECEPTACLE. XX-XXR = NEMA CONFIGURATION, X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK).
GFI XX-XXR	ELECTRIC CORD REEL, FED FROM GFCI BRANCH CIRCUIT BREAKER. 20A, 250VAC RATED, YELLOW INDUSTRIAL REEL, UL TYPE 1, 35FT #12/3 SJO CORD, W/ YELLOW FEMALE WATERPROOF SINGLE RECEPTACLE. CORD REEL SHALL BE MODEL #HBLI35123Y WITH RECEPTACLE END #HBL1533 AS MANUFACTURED BY HUBBELL. PROVIDE BALL STOP #HBLI12BS AND PIVOT BASE #HVLI340PB AS MANUFACTURED BY HUBBELL. XX-XXR = NEMA CONFIGURATION.
GFI XX-XXR	ELECTRIC CORD REEL, FED FROM GFCI BRANCH CIRCUIT BREAKER. 30A, 250VAC RATED, YELLOW INDUSTRIAL REEL, UL TYPE 1, #10/3 SJO CORD, W/ YELLOW LOCKING FEMALE WATERPROOF RECEPTACLE. CORD REEL SHALL BE MODEL #HBLI35103Y WITH RECEPTACLE END #HBL2613VY AS MANUFACTURED BY HUBBELL. PROVIDE BALL STOP #HBLI14BS AND PIVOT BASE #HVLI340PB AS MANUFACTURED BY HUBBELL. XX-XXR = NEMA CONFIGURATION.
	CLOCK (TYPE DENOTED)
J	RECESSED JUNCTION BOX, CONDUIT STUBBED UP TO EASILY ACCESSIBLE SPACE ABOVE CEILING. X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK).
J S	SURFACE MOUNTED JUNCTION BOX, RACEWAY STUBBED UP TO EASILY ACCESSIBLE SPACE ABOVE CEILING. X" = INCHES A.F.F. MOUNTING HEIGHT TO CENTER OF DEVICE (COORDINATE WITH MILLWORK)
J	FLOOR/CEILING RECESSED JUNCTION BOX
PB	PULL BOX
	POWER OR DISTRIBUTION PANEL. HIDDEN LINE REPRESENTS ELECTRICAL CLEARANCE SPACE.
	TRANSFORMER (SIZE AS DENOTED). HIDDEN LINE REPRESENTS ELECTRICAL CLEARANCE SPACE.
XX-1	MOTOR
SB	LOW VOLTAGE MOTORIZED BLIND CONTROLLER. DECOFLEX DRY CONTACT KEYPAD SHALL BE ITEM #1811402 AS MANUFACTURED BY HUNTER DOUGLAS.
$M	SINGLE-POLE OR TWO-POLE (AS REQUIRED), 250V AC, 1 HP RATED, TOGGLE TYPE MANUAL MOTOR STARTED UNIT WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, APPROPRIATELY SIZED THERMAL UNITS, NEMA TYPE 1 OR 4 (AS REQUIRED) ENCLOSURE, AND HANDLE GUARD/LOCK-OFF. SQUARE D CLASS 2510 FG OR FW TYPES (AS REQUIRED) OR APPROVED EQUAL. THREE-POLE, 250V AC, 1 OR 2 HP RATED (AS REQUIRED), TOGGLE TYPE MANUAL MOTOR STARTER UNIT WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, APPROPRIATELY SIZED THERMAL UNITS, NEMA TYPE 1 ENCLOSURE AND HANDLE GUARD/LOCK-OFF. SQUARE D CLASS 2510 K TYPE OR APPROVED EQUAL.
#A #AF NEMA#	FUSIBLE SWITCH TYPE COMBINATION STARTER UNIT WITH DOOR MOUNTED H-O-A SWITCH AND RED "MOTOR RUNNING" LED TYPE PILOT LIGHT. PROVIDE AUXILIARY CONTACT. "NEMA #" IDENTIFIES NEMA ENCLOSURE TYPE. "#A" IDENTIFIES DISCONNECT SWITCH AMPACITY RATING. "#AF", IF PRESENT, IDENTIFIES APPROXIMATE FUSE RATING. UNLESS OTHERWISE NOTED, ALL FUSIBLE DISCONNECT SWITCHES SHALL BE COMPLETE WITH APPROPRIATELY SIZED DE, TD, CL, CLASS RK5 FUSES.
#A NEMA#	NON-FUSIBLE DISCONNECT SWITCH. "#A" IDENTIFIES DISCONNECT SWITCH AMPACITY RATING. "NEMA #" IDENTIFIES NEMA ENCLOSURE TYPE.
#A #AF NEMA#	FUSIBLE DISCONNECT SWITCH. "#A" IDENTIFIES DISCONNECT SWITCH AMPACITY RATING. #AF IDENTIFIES DISCONNECT FUSE SIZE. "NEMA #" IDENTIFIES NEMA ENCLOSURE TYPE.
FB1	FLOOR BOX, ON GRADE CONCRETE. MODEL #RFBE
FRPT1	FIRE-RATED POKE-THRU W/ (2) 20A, 120V AC DUPLEX RECEPTACLES, MULTIMEDIA CONNECTIONS & SURFACE COVER. FIRE RATED POKE-THRU SHALL BE MODEL # 8ATC2BK AS MANUFACTURED BY WIREMOLD LEGRAND.
MM	4 GANG WALLBOX. PROVIDE 11"x13"x3 7/8" DEEP WALL BOX, TILE RING (DEPTH AS REQUIRED), STUB-UP (1) 1-1/4" CONDUIT FROM WALL BOX UP TO DATA OUTLET MOUNTED ABOVE BOX AT 72" A.F.F. FURNISH BOX WITH TWO GANGS FOR 5-20R DUPLEX RECEPTACLES, ONE GANG FOR (1) COAX "F" , (1) HDMI AND (2) RJ-45 ETHERNET CONNECTIONS, AND ONE GANG SPARE. MOUNTING HEIGHT TO BOTTOM OF BOX SHALL BE AS COORDINATED WITH ARCHITECTURAL DRAWINGS. WALLBOX MODEL SHALL BE #EFSB4 AS MANUFACTURED BY WIREMOLD LEGRANDE.
WM	4" WIDE STAINLESS STEEL RACEWAY, 20A-120V DUPLEX RECEPTACLE @ EVERY 6" O.C. RACEWAY SHALL BE #DS4000 AS MANUFACTURED BY WIREMOLD LEGRANDE. PROVIDE RACEWAY WIRE DIVIDER FOR COMMUNICATIONS INSTALLATIONS WHERE SHOWN ON DRAWINGS.

SYMBOL	DESCRIPTION
	BUS DUCT WITH PLUG IN DISCONNECT (FUSED)
R	RELAY
	ENCLOSED CIRCUIT BREAKER
	PRESSURE SWITCH
	FLOAT SWITCH
CP	PHOTOCELL
TC	~~TIME CLOCK. AS SHOWN ON WIRING DIAGRAMS~~
	TELEPHONE OUTLET CONSISTING OF ONE 4 PORT COVERPLATE, 4" SQUARE BOX, DEVICE PLATE, TILE RING (DEPTH AS REQUIRED), (1) 1-1/4" CONDUIT STUBBED UP INTO THE NEAREST ACCESSIBLE CEILING, POTS LINE TERMINATED AT DEVICE OUTLET AND RAN BACK TO DEMARC BACKBOARD. MOUNTING HEIGHT=18" AFF TO THE CENTER OF DEVICE BOX UNLESS OTHERWISE NOTED. CITY TO FURNISH AND INSTALL HEAD-END EQUIPMENT AND TERMINATIONS AT HEAD-END EQUIPMENT.
	COMBINATION VOICE/DATA OUTLET CONSISTING OF ONE 4 PORT COVERPLATE, 4" SQUARE BOX, TILE RING (DEPTH AS REQUIRED), 1-1/4" CONDUIT STUBBED UP INTO THE NEAREST EASILY ACCESSIBLE CEILING SPACE AND CAT-6 CABLE TERMINATED ON WIRING DEVICE AND INSTALLED BACK TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM. MOUNTING HEIGHT=18" AFF TO THE CENTER OF DEVICE BOX UNLESS OTHERWISE NOTED. E.C. SHALL FURNISH AND INSTALL WIRING DEVICES, DEVICE PLATES, AND WIRE TERMINATED ON WIRING DEVICE. CITY TO FURNISH AND INSTALL HEAD-END EQUIPMENT, TERMINATE AT HEAD-END EQUIPMENT AND PERFORM ALL PROGRAMMING.
48" S	COMBINATION VOICE/DATA OUTLET CONSISTING OF ONE 4 PORT COVERPLATE, SURFACE MOUNTED 4" SQUARE BOX, TILE RING (DEPTH AS REQUIRED), 1-1/4" CONDUIT STUBBED UP INTO THE NEAREST EASILY ACCESSIBLE CEILING SPACE AND CAT-6 CABLE TERMINATED ON WIRING DEVICE AND INSTALLED BACK TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM. MOUNTING HEIGHT=18" AFF TO THE CENTER OF DEVICE BOX UNLESS OTHERWISE NOTED. E.C. SHALL FURNISH AND INSTALL WIRING DEVICES, DEVICE PLATES, AND WIRE TERMINATED ON WIRING DEVICE. CITY TO FURNISH AND INSTALL HEAD-END EQUIPMENT, TERMINATE AT HEAD-END EQUIPMENT AND PERFORM ALL PROGRAMMING.
	WIRELESS ACCESS POINT CONSISTING OF JUNCTION BOX, TILE RING AND CAT-6 WIRE INSTALLED BACK TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM BY E.C. CITY SHALL PROVIDE ALL DEVICES, DEVICE PLATES AND TERMINATIONS ON BOTH ENDS.
TV	TELEVISION OUTLET. PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED), STUB-UP 1 1/4" CONDUIT TO NEAREST ACCESSIBLE SPACE, AND RG-6 CABLE INSTALLED FROM DEMARC TO OUTLET. MOUNTING HEIGHT = 18" A.F.F. TO CENTER OF DEVICE. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL DEVICES, DEVICE PLATES, AND COAX CABLE.
S	HORN TYPE SPEAKER
S ! (1)	ALERTING SYSTEM VISUAL FHA TROUBLE STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
S R	ALERTING SYSTEM VISUAL FHA RED STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
AS	ALERTING SYSTEM CEILING MOUNTED 8" SPEAKER. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
AS OD	ALERTING SYSTEM CEILING MOUNTED OMNI-DIRECTIONAL SPEAKER. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
BS	ALERTING SYSTEM CEILING MOUNTED BATHROOM SPEAKER. ALERTING SYSTEM RED VISUAL STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
LED	ALERTING SYSTEM CEILING MOUNTED 8" LED LIGHT/SPEAKER. ALERTING SYSTEM RED VISUAL STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
AS	ALERTING SYSTEM WALL MOUNTED SPEAKER. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
RS	ALERTING SYSTEM EXTERIOR WALL RECESS MOUNTED SPEAKER WITH GRILL GUARD. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
ME	ALERTING SYSTEM WALL MOUNTED MEDICAL EMERGENCY BUTTON. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
$3S	ALERTING SYSTEM 3 BUTTON ALERT SELECTOR. ALERTING SYSTEM RED VISUAL STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
$V	ALERTING SYSTEM SPEAKER VOLUME CONTROL STATION. ALERTING SYSTEM RED VISUAL STROBE LIGHT. E.C. SHALL FURNISH AND INSTALL J-BOXES, 3/4" CONDUIT, WIRING DEVICES, DEVICE PLATES, ALL WIRE, TERMINATIONS AND PROGRAMMING. REFER TO "AL" ARCHITECTURAL DRAWING SET FOR SYSTEM SPECIFICATIONS.
M	MICROPHONE OUTLET
	ANTENNA

SYMBOL	DESCRIPTION
ES	ELECTRIC STRIKE, (AS PROVIDED BY SECURITY CONTRACTOR) JUNCTION BOX AT DOOR STRIKE LOCATION.
ML	MAGNETIC LOCK
CL	COMBINATION LOCK
DC	DOOR CONTACTS (1)
CR	BIO-METRIC READER, CONSISTING OF 4" SQUARE JUNCTION BOX AT 48" A.F.F., 120V/24V LOW VOLTAGE TRANSFORMER, TILE RING (DEPTH AS REQUIRED), BIO-METRIC READER (AS PROVIDED BY OWNERS SECURITY CONTRACTOR), JUNCTION BOX OVERTOP OF DOOR JAM, 3/4" CONDUIT CONNECTING JUNCTION BOXES, AND CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE FROM TOP JUNCTION BOX. REFER TO DRAWING E602 FOR DETAILS. OWNER'S SECURITY VENDOR TO PROVIDE ALL HEAD-END EQUIPMENT, DEVICES, TERMINATIONS AND PROGRAMMING. E.C. SHALL PROVIDE ALL TRANSFORMERS, TILE RINGS, JUNCTION BOXES, CONDUIT, LINE VOLTAGE WIRE, AND LOW-VOLTAGE WIRE INSTALLED FROM WIRING DEVICE BOX TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM.
HS	HAND SWIPE PROXIMITY READER, CONSISTING OF 4" SQUARE JUNCTION BOX AT 48" A.F.F., TILE RING (DEPTH AS REQUIRED), PROXIMITY READER (AS PROVIDED BY OWNERS SECURITY CONTRACTOR), JUNCTION BOX OVERTOP OF DOOR JAM, 3/4" CONDUIT CONNECTING JUNCTION BOXES, AND CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE FROM TOP JUNCTION BOX. REFER TO DRAWING E602 FOR DETAILS. OWNER'S SECURITY VENDOR TO PROVIDE ALL HEAD-END EQUIPMENT, DEVICES, TERMINATIONS AND PROGRAMMING. E.C. SHALL PROVIDE ALL TRANSFORMERS, TILE RINGS, JUNCTION BOXES, CONDUIT, LINE VOLTAGE WIRE, AND LOW-VOLTAGE WIRE INSTALLED FROM WIRING DEVICE BOX TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM.
	SINGLE BUTTON "PUSH TO ENTER" DEVICE. E.C. SHALL FURNISH AND INSTALL J-BOX AND 3/4" CONDUIT STUBBED UP ABOVE CEILING AND WIRE INSTALLED FROM DEVICE BOX TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM. SECURITY VENDOR TO FURNISH AND INSTALL DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMMING.
	KEYPAD
MD	WALL MOUNTED MOTION DETECTOR
MD	CEILING MOUNTED MOTION DETECTOR
E	NURSE CALL EMERG. STATION
B	NURSE CALL CODE BLUE EMERG. STATION
D	NURSE CALL DUTY STATION
S	NURSE CALL STAFF STATION
P	NURSE CALL SINGLE PATIENT STATION
P 2	NURSE CALL DUAL PATIENT STATION
N 1	~~NURSE CALL DOME LIGHT (2 LAMP)~~ (1)
WP	CCTV CAMERA LOCATION, CONSISTING OF 4" SQUARE JUNCTION BOX, CAT-6 CABLE INSTALLED TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM, TILE RING(DEPTH AS REQUIRED), AND 1" CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE WHEN WALL MOUNTED. ALL HEAD-END EQUIPMENT, DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMMING PROVIDED BY SECURITY VENDOR. WP=WEATHERPROOF COVER.
WP	CCTV CAMERA WITH PAN/TILT DRIVE LOCATION, CONSISTING OF 4" SQUARE JUNCTION BOX, CAT-6 CABLE INSTALLED TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM, TILE RING(DEPTH AS REQUIRED), AND 1" CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE WHEN WALL MOUNTED. ALL HEAD-END EQUIPMENT, DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMMING PROVIDED BY SECURITY VENDOR. WP=WEATHERPROOF COVER
360 WP	360 DEGREE CCTV CAMERA DRIVE LOCATION, CONSISTING OF 4" SQUARE JUNCTION BOX, CAT-6 CABLE INSTALLED TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM, TILE RING(DEPTH AS REQUIRED), AND 1" CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE WHEN WALL MOUNTED. ALL HEAD-END EQUIPMENT, DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMMING PROVIDED BY SECURITY VENDOR. WP=WEATHERPROOF COVER
IC MS	WALL MOUNTED VIDEO DOORBELL MASTER STATION LOCATION. CONSISTING OF 3 GANG JUNCTION BOX. HEAD-END, DEVICE, PROGRAMMING AND TERMINATIONS PROVIDED AND INSTALLED BY SECURITY CONTRACTOR. E.C. SHALL FURNISH AND INSTALL RECESSED 4" SQ. JUNCTION BOX, 3/4" CONDUIT STUBBED UP TO ACCESSIBLE SPACE ABOVE CEILING, AND CABLING RUN TO HEAD-END EQUIPMENT.
IC DS	STAINLESS STEEL WEATHER RESISTANT DOOR STATION LOCATION WITH VIDEO CAMERA. HEAD-END EQUIPMENT, DEVICE, PROGRAMMING AND TERMINATIONS PROVIDED AND INSTALLED BY SECURITY CONTRACTOR. E.C. SHALL FURNISH AND INSTALL RECESSED 4" SQ. JUNCTION BOX, 3/4" CONDUIT STUBBED UP TO ACCESSIBLE SPACE ABOVE CEILING, AND CABLING RUN TO HEAD-END EQUIPMENT.
1	KEYED NOTE (SEE KEYNOTE ON PLAN)
X-#	TYPICAL BRANCH CIRCUITING HOME RUN SYMBOL. GENERALLY, 15A AND 20A BRANCH CIRCUITS CONSISTS OF (2) #12 AWG CU. AND (1) #12 AWG CU. GND. IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. "X" IDENTIFIES PANELBOARD DESIGNATION; "#" IDENTIFIES PANELBOARD CIRCUIT NUMBER.
	LIGHT AND SOLID SYMBOL INDICATES EXISTING TO REMAIN
	DARK AND SOLID SYMBOL INDICATES NEW WORK
	DARK AND DASHED SYMBOL INDICATES DEMOLISHED.
	BELL
	BUZZER
	CHIME
	DOOR SIGNAL - APT. UNIT
	~~FIRE ALARM REMOTE ANNUNCIATOR~~ (1)
R	PHOTOVOLTAIC SYSTEM SMOKE DETECTOR, E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED), R = ELEVATOR RECALL
	~~RATE OF RISE SYSTEM HEAT DETECTOR, E.C. SHALL PROVIDE 4"~~ SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED).
S	PHOTOELECTRIC SYSTEM DUCT SMOKE DETECTOR WITH REMOTE TEST STATION
C	FIRE ALARM SYSTEM CARBON MONOXIDE DETECTOR, E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED).
C	FIRE ALARM SYSTEM COMBINATION SMOKE/CO DETECTOR. E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED).
F WP	FIRE ALARM WALL MOUNTED STROBE LIGHT. E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED). WP = WEATHERPROOF
F	FIRE ALARM HORN STROBE. E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED). WP=WEATHERPROOF, LF=LOW FREQUENCY
F WP	FIRE ALARM BELL. E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED). WP=WEATHERRPROOF
F P	F.A. PULLSTATION, E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED). WP = WEATHERPROOF
	SPRINKLER FLOW SWITCH
	SPRINKLER VALVE TAMPER SWITCH
PF	FIRE PUMP FAIL. FIRE ALARM ADDRESSABLE MODULE
PR	FIRE PUMP PHASE REVERSAL. FIRE ALARM ADDRESSABLE MODULE
R	FIRE PUMP RUN. FIRE ALARM ADDRESSABLE MODULE
FR	FIRE ALARM SHUT-DOWN RELAY

ELECTRICAL ABBREVIATIONS LIST

ABBREV.	MEANING
1P	1 POLE (2P, 3P, 4P, ETC.)
A	AMPERE
AC	ABOVE COUNTER OR AIR CONDITIONER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUASTAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
COMB	COMBINATION
CMPR	COMPRESSOR
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION OR CONTINUOUS
CONTR	CONTRACTOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DPR	DAMPER
DS	SAFETY DISCONNECT SWITCH
DT	DOUBLE THROW
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
E.C.P.	ELECTRICAL PRIME CONTRACTOR
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXH	EXHAUST
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FU	FUSE
FUDS	FUSED SAFETY DISCONNECT SWITCH
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HOA	HANDS-OFF-AUTOMATIC SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWP	HYDRONIC WATER PUMP
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
I/W	INTERLOCK WITH
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MAG.S	MAGNETIC STARTER
M/C	MOMENTARY CONTACT
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSP	MOTOR STARTER PANELBOARD
MSBD	MAIN SWITCHBOARD
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
MTR	MOTOR, MOTORIZED
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
S/N	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SR	SURFACE RACEWAY
SS	STAINLESS STEEL
SSW	SELECTOR SWITCH
S/S	STOP/START PUSHBUTTONS
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	UNIT VENTILATOR OR ULTRAVIOLET
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WG	WIRE GUARD
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER
@	AT
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C	CENTER LINE
P	PLATE

SEISMIC REQUIREMENTS FOR ELECTRICAL SYSTEMS

PER IBC-2015/ASCE 7-10

A. EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS AND ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
B. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.
C. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.
D. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.
E. SEISMIC RESTRAINTS FOR CONDUIT, CABLE TRAY AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.
F. REFER TO ASCE 7-10 FOR SEISMIC INSTALLATION GUIDELINES.

ELECTRICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION	
Ip = 1.0	Ip = 1.5
• ALL ASSOCIATED ELECTRICAL WORK UNLESS NOTED OTHERWISE	• EMERGENCY LIGHTS • EXIT LIGHTS

SEISMIC DESIGN CATEGORIES D, E, F

	COMPONENT IMPORTANCE FACTOR (Ip)			
	1.0		1.5	
COMPONENT IDENTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED	RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
WALL MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
COMPONENT SUPPORTS	RESTRAIN ALL	1,2	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	RESTRAIN ALL	1	RESTRAIN ALL	-
SINGLE CONDUIT	>3"	3,4	>1"	3,4
CABLE TRAY/BUS DUCT TRAPEZED CONDUIT	RESTRAIN IF ANY CONDUIT ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	4	RESTRAIN IF ANY CONDUIT ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 5)	NOT REQUIRED	-	REQUIRED	-
PENDANT, LAY-IN AND CAN LIGHTS	REQUIRED	-	REQUIRED	6

NOTES:
1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4' OR LESS ABOVE A FLOOR AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
3. ALL NON-DUCTILE PIPING (I.E. PLASTIC) MUST BE RESTRAINED.
4. RESTRAINT IS NOT REQUIRED IF SUSPENDED 12" OR LESS FROM THE STRUCTURE AND THE HANGERS ARE DETAILED TO AVOID SIGNIFICANT BENDING OF THE HANGERS AND THEIR ATTACHMENTS AND PROVISIONS ARE MADE FOR PIPING TO ACCOMMODATE EXPECTED DEFLECTIONS.
5. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.
6. THE RESTRAINT OF PENDANT, LAY-IN AND CAN LIGHTS IS GOVERNED BY "CISCA-04 FOR SEISMIC ZONES" (CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION).

GENERAL ELECTRICAL NOTES

A. E.C. SHALL BE RESPONSIBLE FOR THE FURNISHING AND INSTALLATION OF ALL EQUIPMENT, DEVICES, ACCESSORIES AND THE WIRING OF SAID SYSTEMS, DEVICES, PERIPHERAL ACCESSORIES THAT ARE SHOWN ON THESE DRAWINGS AND THAT ARE SPECIFIED IN THE MULTIPLE CONTRACT SUMMARY, CONTRACT PACKAGE REFERENCE, AND CONTRACT PACKAGE SUPPLEMENTARY INSTRUCTIONS OF THE PROJECT BOOK SPECIFICATIONS, AND MAKING A FULLY COMPLETE AND OPERATIONAL SYSTEM TO THE OWNERS/OWNERS ONSITE REPRESENATIVES FULL SATISFACTION.

B. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY. ALL RACEWAY WITHIN THE STRUCTURE ABOVE THE FLOOR SLAB SHALL BE METAL. RACEWAY BELOW THE FLOOR SLAB AND UNDERGROUND RACEWAY OUTSIDE THE STRUCTURE SHALL BE SCHEDULE 40 PVC.

C. E.C. SHALL FURNISH AND INSTALL ALL SYSTEMS, DEVICES, AND PERIPHERAL ACCESSORIES IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. E.C. SHALL ENSURE ALL SYSTEMS ARE FULLY COMPLETE AND OPERATIONAL TO THE OWNERS' ONSITE REPRESENATIVE'S FULL SATISFACTION.

D. ALL LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY WHERE NOTED. LOW VOLTAGE CABLES MAY BE RUN IN CABLE SUPPORT HOOKS ABOVE ACCESSIBLE CEILINGS WHERE NOTED.

E. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ECTRICAL DRAWINGS. SEE ARCHITECTURAL ELEVATIONS FOR LOCATIONS OF ALL ELECTRICAL DEVICES.

F. VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN WITH ARCHITECTURAL DRAWINGS.

G. CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS OTHERWISE NOTED.

H. FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE NEAREST EASILY ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWISE:
- 1"C TV OUTLETS
- 1 1/4"C TELE/DATA OUTLETS
- 3/4"C FIRE ALARM DEVICES
- (2) 2"C FLOOR BOXES

I. E.C. SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING WIRING FOR ALL OF THE SYSTEMS AND THIER PERIPHERAL DEVICES, FROM DEVICE TO HEAD END LOCATION LISTED IN NOTE J.

J. CCTV, TELE/DATA, WI-FI, CARD ACCESS, CAD ALERTING AND ANTENNA SYSTEMS. E.C. SHALL FURNISH AND INSTALL BACK BOXES AND CONDUIT WITH PULLSTRINGS STUBBED UP ABOVE ACCESSIBLE CEILING SPACE FOR ALL WALL MOUNTED DEVICES. E.C. SHALL COORDINATE ALL LOCATIONS AND HEIGHTS OF DEVICES WITH ARCHITECTURAL DRAWINGS AND OWNER'S VENDORS.

K. ALL HEAD END EQUIPMENT AND LOCAL DEVICE TERMINATIONS FOR CCTV, TELE/DATA, WIFI, ANTENNA SYSTEMS, AND CARD ACCESS SHALL BE FURNISHED AND INSTALLED BY OWNER'S VENDORS.

ALL HEAD END EQUIPMENT AND LOCAL DEVICE TERMINATIONS SHALL BE INSTALLED BY THIRD-PARTY CAD ALERTING VENDOR UNDER ELECTRICAL PRIME SCOPE OF WORK.

ELECTRICAL PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND INSTALLING ALL ASSOCIATED BOXES, CONDUIT, AND WIRE RUNS AS REQUIRED FOR CAD ALERTING SYSTEM DEVICES, AS ILLUSTRATED ON THE CAD ALERTING SYSTEM DRAWINGS. CAD ALERTING SUBCONTRACTOR TO BE RESPONSIBLE FOR LOCAL DEVICE INSTALLATION, HEAD END TERMINATIONS, AND FINAL NETWORK PROGRAMMING.

L. ALL LIGHTING FIXTURES WITH 0-10V DIMMING DRIVERS SHALL BE FED WITH LUMINAIRY "LED" CABLE WITH PURPLE AND GREY LOW VOLTAGE DIMMING WIRES BUILT INTO CABLE.

M. ALL LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILINGS SHALL BE FURNISHED AND INSTALLED WITH TENMAT OVER FIXTURES TO KEEP ALL FIRE RATINGS AS SPECIFIED BY ARCHITECT FOR TIME PERIODS AS CALLED OUT ON ARCHITECTURAL DRAWINGS. E.C. SHALL COORDINATE ALL FIRE RATED CEILING LOCATIONS WITH ARCHITECTURAL DRAWINGS IN FIELD.

ELECTRICAL DRAWINGS

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

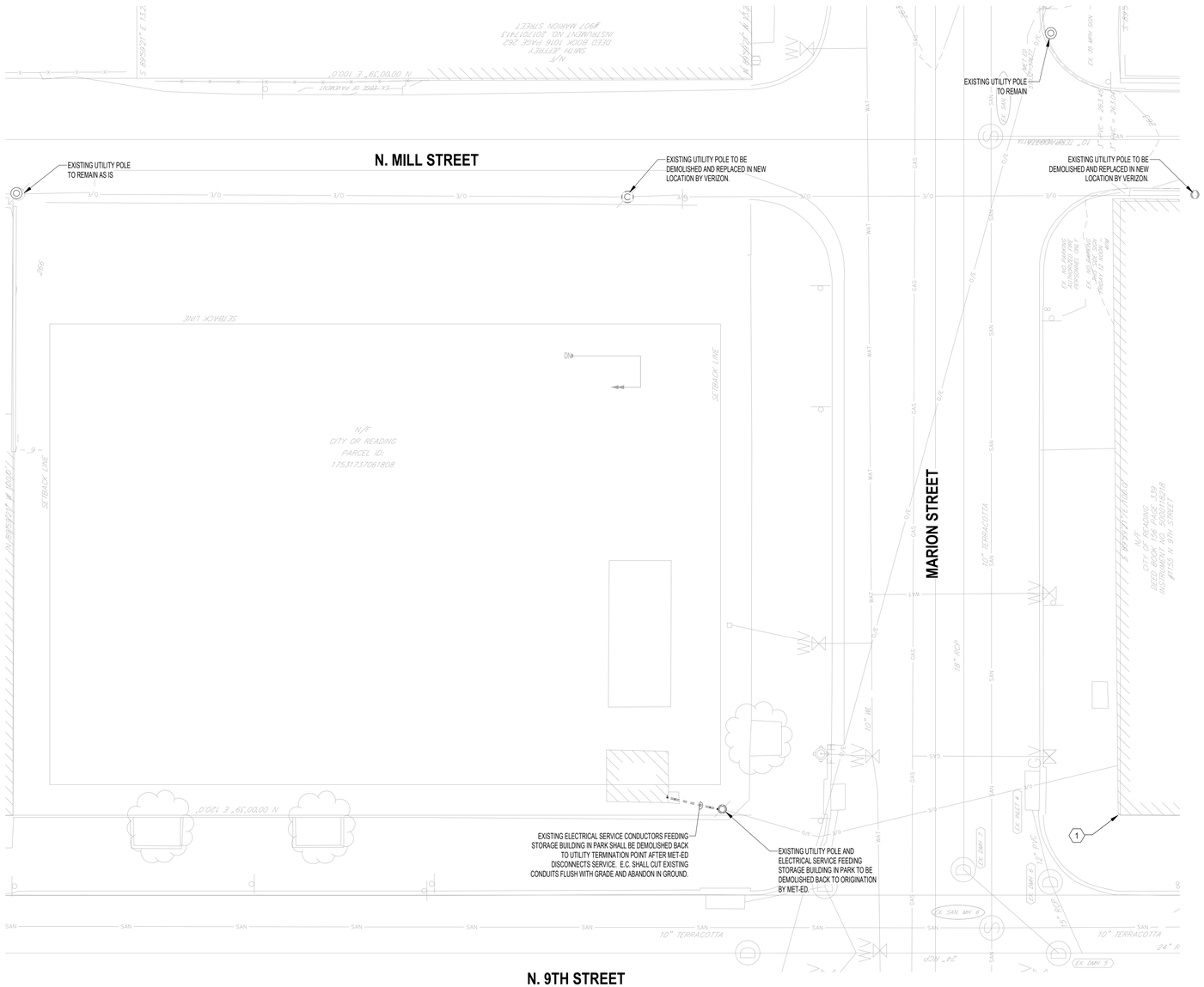
CONSULTANT: DEDC LLC ENGINEERING | DESIGN | CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ELECTRICAL SYMBOLS AND ABBREVIATIONS
SHEET NUMBER: E0.00

8/24/2021 5:47:55 PM



1 ELECTRICAL SITE DEMOLITION PLAN

1" = 10'-0"

0 5' 10' 20'

GENERAL SITE DEMOLITION NOTES

1. ALL ITEMS SHOWN DARK AND DASHED ARE TO BE DEMOLISHED U.O.N. ALL ITEMS SHOWN LIGHT AND SOLID ARE EXISTING TO REMAIN.
2. ALL ELECTRIC SERVICE WORK SHALL BE COORDINATED IN FIELD WITH ELECTRICAL UTILITY COMPANY PRIOR TO COMMENCING WORK.
3. E.C. SHALL COORDINATE ALL ELECTRICAL SERVICE UTILITY POLE LOCATIONS WITH ELECTRICAL PLANS AND UTILITY COMPANY.
4. E.C. SHALL LAWFULLY DISCARD OF ALL DEMOLISHED MATERIALS IN ACCORDANCE WITH ALL FEDERAL, STATE, CITY AND LOCAL CODES AND ORDINANCES THAT ARE IN EFFECT.

KEYNOTES

1. E.C. SHALL DE-ENERGIZE, DISCONNECT AND SAFEGUARD EXISTING FIRE DEPARTMENT LIGHT FIXTURE CURRENTLY INSTALLED IN THIS LOCATION. E.C. SHALL LEAVE EXISTING BRANCH CIRCUIT, BOX AND CIRCUIT BREAKER ABANDONED FOR FUTURE USE. E.C. SHALL ROLL-UP AND CAP-OFF EXISTING BRANCH CIRCUIT IN BOX AND FURNISH AND INSTALL BLANK COVERPLATE ON BOX. E.C. SHALL SAFEGUARD FIXTURE UNTIL FIXTURE IS READY TO BE INSTALLED IN NEW BUILDING AS SHOWN ON DRAWING E2.00.

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SEAL:

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CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

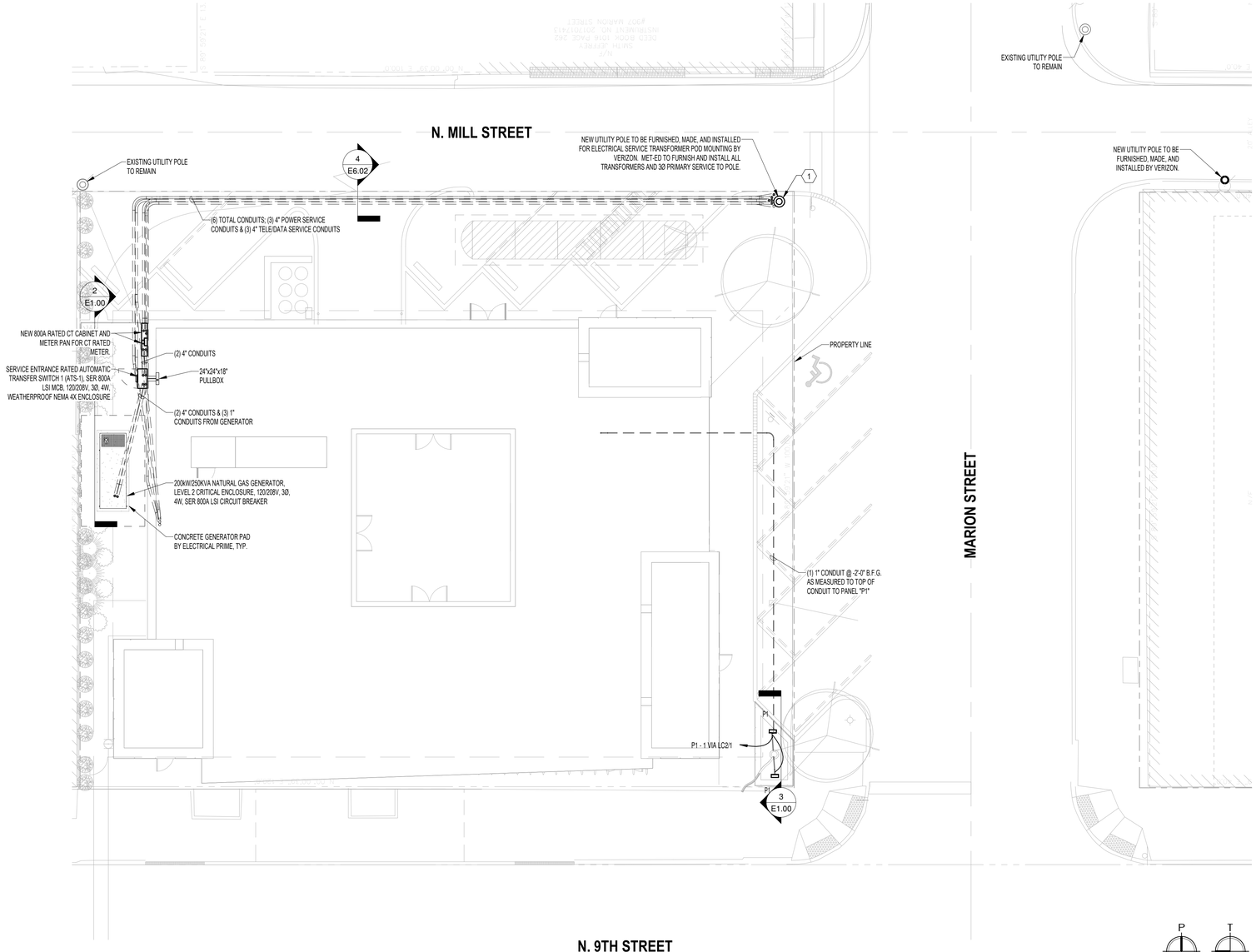
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: ELECTRICAL DEMOLITION SITE PLAN

SHEET NUMBER: ED1.00

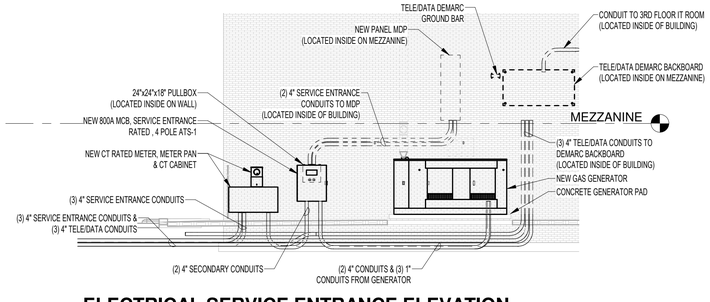
7/2/2021 4:51:35 PM



1 SITE POWER PLAN

1" = 10'-0"

0 5' 10' 20'



2 ELECTRICAL SERVICE ENTRANCE ELEVATION

1/8" = 1'-0"

0 8' 16' 32'

3 FLAGPOLE LIGHTING ELEVATION

1/4" = 1'-0"

0 2' 4' 8'

GENERAL SITE NOTES

1. ALL ITEMS SHOWN DARK AND SOLID ARE NEW WORK. ALL ITEMS SHOWN LIGHT AND SOLID ARE EXISTING TO REMAIN.
2. ALL ELECTRIC SERVICE WORK SHALL BE COORDINATED IN FIELD WITH ELECTRIC UTILITY COMPANY.
3. ALL CONDUITS SHOWN ON PLAN TO BE INSTALLED IN TRENCH SHALL BE PROVIDED WITH PULLSTRINGS AND SHALL UTILZE RED METALLIC MARKER TAPE AT A MAXIMUM OF 12" BELOW FINISHED GRADE CENTERED OVERTOP OF CONDUIT.
4. ALL TRENCHING SHOWN ON PLANS IS DIAGRAMATICAL. E.C. SHALL COORDINATE ALL TRENCHING IN FIELD.
5. E.C. SHALL UTILIZE THE SERVICES OF SOFT-DIG TO SCAN UNDERGROUND FOR EXISTING UTILITIES BEFORE TRENCHING COMMENCES.
6. ALL POWER CONDUITS SHALL BE INSTALLED IN TRENCH AT A MINIMUM OF 3'-0" B.F.G. AS MEASURED TO TOP OF CONDUIT. ALL TELE/DATA CONDUITS SHALL BE INSTALLED IN TRENCH AT A MINIMUM OF 18" B.F.G AS MEASURED TO TOP OF CONDUIT.
7. E.C. SHALL BE RESPONSIBLE FOR PROVIDING THE FOLLOWING SERVICE ENTRANCE MATERIALS AND EQUIPMENT: ALL SECONDARY SERVICE CONDUITS, SECONDARY CONDUCTORS TO TOP OF POLE WITH 20' EXTRA CABLE, PULLSTRINGS, CT CABINET, METER PAN AND METER, TRENCHING, BACKFILLING, CONCRETE DUCTBANK AND ASSOCIATED PERIPHERAL MATERIAL, PULLBOXES, SER RATED ATS, AND MAIN DISTRIBUTION PANEL. MET-ED SHALL FURNISH AND INSTALL (3) POLE MOUNTED TRANSFORMERS, OVERHEAD PRIMARY CONDUCTORS, LI-GUARD, AND ALL PRIMARY POLE WORK, EQUIPMENT AND TERMINATIONS AT TRANSFORMERS. VERIZON SHALL FURNISH AND INSTALL UTILITY POLES ONSITE.

KEYNOTES

1. E.C. SHALL TERMINATE ALL CONDUITS AT BASE OF POLE, (1) SPARE SECONDARY CONDUIT SHALL BE STUBBED UP AND CAPPED OFF. E.C. SHALL COORDINATE TELE/DATA CONNECTION POINT ON THIS POLE WITH VERIZON AND COMCAST FIELD REPRESENTATIVES.

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CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

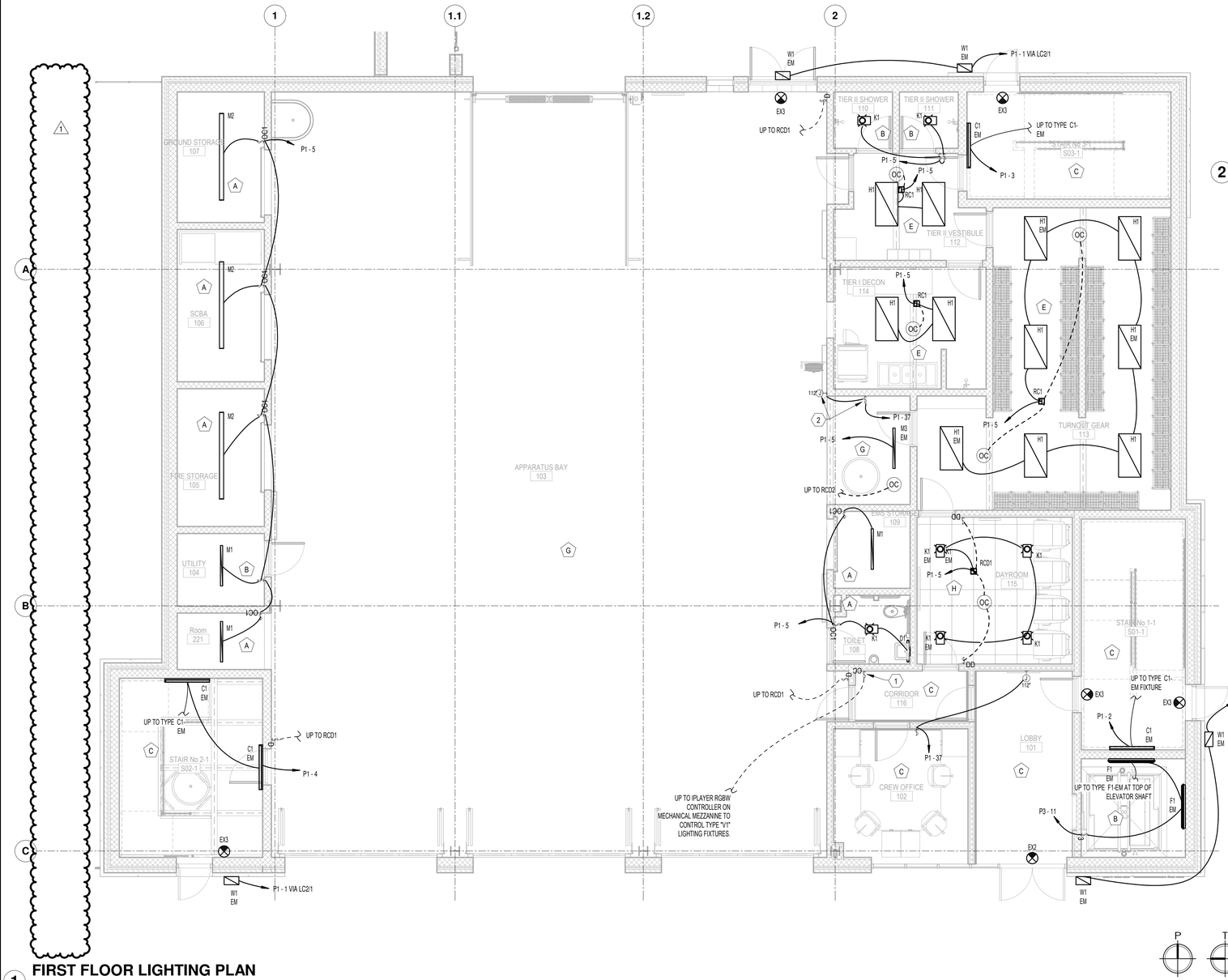
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: ELECTRICAL NEW WORK SITE PLAN

SHEET NUMBER: E1.00

7/2/2021 4:49:23 PM



1 FIRST FLOOR LIGHTING PLAN

3/16" = 1'-0"

0 4' 8' 12'

2 FIRE DEPT EXISTING LIGHT FIXTURE

NOT TO SCALE

GENERAL LIGHTING NOTES

1. ALL LIGHTING INSTALLED IN PATHS OF EGRESS THAT ARE CONTROLLED BY OCCUPANCY SENSORS SHALL HAVE A FIRE ALARM CONTROL MODULE FURNISHED, INSTALLED, AND WIRED INTO THE LIGHTING CONTROLLER TO AUTOMATICALLY PUSH LIGHTING TO 100% ON IN EVENT OF FIRE ALARM SYSTEM ACTIVATION. E.C. SHALL FURNISH AND INSTALL A LMIO-100 INTERFACE DEVICE TO WORK WITH THE LIGHTING CONTROL SYSTEM AND FIRE ALARM SYSTEM INPUT. E.C. SHALL INSTALL ALL WIRING AND DEVICES PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. ALL LIGHTS LABELED "EM" SHALL BE FURNISHED WITH AN EXTRA #12 AWG WIRE FED UNSWITCHED FROM LIGHTING CIRCUIT FEEDING FIXTURE FOR CORRECT EMERGENCY OPERATION.
3. ALL ROOM CONTROLLERS AND OCCUPANCY SENSORS SHALL BE SET FOR 20 MIN. MAX VACANCY TIME.
4. ALL EXIT SIGNS SHALL BE FED UNSWITCHED FROM THE NEAREST LOCAL LIGHTING CIRCUIT IN AREA IN WHICH FIXTURE IS SERVING.
5. ALL WIRING SHOWN DASHED FROM ROOM CONTROLLERS REPRESENT LOW VOLTAGE CAT-5E WIRING. ALL DARK SOLID LINES SHOWN FROM ROOM CONTROLLERS REPRESENTS LINE VOLTAGE SWITICH LEGS. IF MULTIPLE SWITCH LEGS ARE SHOWN FROM ROOM CONTROLLER EACH IS FED FROM A SEPERATE RELAY INTERGRAL TO THE CONTROLLER, AS SUCH, EACH RELAY SHALL BE CONTROLLED BY IT'S OWN MANUAL CONTROL DEVICE, IF PRESENT IN THE AREA, AND SHALL BE PROGRAMMED TO BE OVERALL CONTROLLED BY THE OCCUPANCY SENSOR AS SHOWN IN LIGHTING CONTROL SCHEDULE.
6. E.C. SHALL COORDINATE MOUNTING HEIGHTS OF ALL LIGHT FIXTURES AND EXIT SIGNS IN FIELD WITH CEILING TYPES AND MECHANICAL EQUIPMENT.
7. REFER TO LIGHTING CONTROL SCHEME SCHEDULE FOR LIGHTING CONTROL SETTINGS. ALL SETTINGS SHALL BE COORDINATED WITH OWNER IN FIELD.
8. ALL CONDUITS SHALL BE INSTALLED IN BLOCK WALL AND SHALL NOT BE INSTALLED EXPOSED AT ANY POINT ALONG ANY BLOCK WALL SURFACE.
9. E.C. SHALL REFER TO LIGHTING CONTROL WIRING DIAGRAMS ON DRAWING E6.02 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.
10. ALL LIGHTING FIXTURES SHALL BE FED FROM A JUNCTION BOX WITH 6' WHIPS.
11. ROOM CONTROLLERS ARE SHOWN IN THEIR LOCATIONS FOR CIRCUITING CLARITY. E.C. SHALL FURNISH AND INSTALL ALL ROOM CONTROLLERS LOCATED IN ROOMS WITH WOOD SLAT CEILINGS IN ELECTRICAL ROOM.
12. ALL LOCATIONS SHOWN WITH MULTIPLE SWITCHES SHALL BE INSTALLED IN A MULTI-GANG BOX FOR QUANTITY OF DEVICES AS SHOWN ON PLANS. E.C. SHALL COORDINATE ALL LOCATIONS AND QUANTITIES WITH ELECTRICAL AND ARCHITECTURAL DRAWINGS.
13. ALL WALL MOUNTED OCCUPANCY/ VACANCY SENSORS, DAYLIGHT HARVESTERS AND SPEAKERS SHALL BE MOUNTED AT 8'-6" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWINGS.

KEYNOTES

1. E.C. SHALL FURNISH AND INSTALL IPLAYER RGBW CONTROLLER ON MECHANICAL MEZZANINE FOR CONTROL OF COLOR CHANGING FIXTURES ON MEZZANINE LEVEL AND SECOND FLOORS AS SHOWN ON LIGHTING PLANS. E.C. SHALL FURNISH AND INSTALL ALL LOW-VOLTAGE CAT-5E WIRING FROM CONTROLLER TO SWITCH AND FROM CONTROLLER TO FIXTURES. E.C. SHALL FURNISH AND INSTALL POWER SUPPLY TO FIXTURES FROM CIRCUIT BREAKER IN PANEL AS SHOWN. E.C. SHALL COORDINATE ALL WORK WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND TYPICAL CONNECTION WIRING DIAGRAM ON DRAWING E7.00
2. E.C. SHALL FURNISH AND INSTALL A JUNCTION BOX RECESSED FLUSH WITH FACE OF WALL FOR INSTALLATION OF AN EXISTING FIRE DEPARTMENT FIXTURE CURRENTLY MOUNTED ON EXISTING FIREHOUSE. E.C. SHALL DE-ENEGIZE, DISCONNECT AND REMOVE EXISTING FIRE DEPARTMENT FIXTURE FROM CORNER OF EXISTING FIRE DEPARTMENT BUILDING. E.C. SHALL TRANSPORT FIXTURE TO NEW BUILDING AND INSTALL IN LOCATION AS COORDINATED WITH ARCHITECTURAL DRAWINGS. REFER TO PICTURE OF FIXTURE ON THIS DRAWING.

LIGHTING CONTROL SCHEME SCHEDULE

A	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR
B	MANUAL ON/MANUAL OFF	SINGLE POLE OR THREE POLE TOGGLE SWITCH
C	CIRCUIT BREAKER CONTROL, FIXTURES DIM TO 10% OUTPUT WHEN VACANT/ 100% OPERATION ON OCCUPANCY	CIRCUIT BREAKER
D	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), PATH OF EGRESS LIGHTING CONTROLLED BY OCCUPANCY SENSORS ARE TIED INTO FIRE ALARM SYSTEM FOR AUTOMATIC 100% ON OPERATION IN BUILDING SYSTEM FIRE ALARM EVENT	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER LMIO DEVICE
E	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER
F	MANUAL ON/MANUAL OFF/MANUAL DIMMING	SINGLE POLE DIGITAL 0-10V DIMMING SWITCH
G	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), MANUAL & AUTOMATIC DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLERS DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES
H	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER CEILING MOUNTED OCCUPANCY SENSOR (2) LOW-VOLTAGE DIMMING SWITCHES
J	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
K	PHOTOCELL/TIMECLOCK CONTROLLED, FLOOD LIGHT MANUAL SWITCH CONTROLLED	TIMECLOCK AND LIGHTING CONTACTOR, SINGLE POLE TOGGLE SWITCH
L	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE) RELAY 1, MANUAL ON/AUTOMATIC OFF RELAY 2	WALL MOUNTED DUAL RELAY TWO BUTTON PASSIVE INFRARED OCCUPANCY SENSOR
M	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSORS CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES THREE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
N	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07/29/2021

PROJECT NUMBER: 20-088

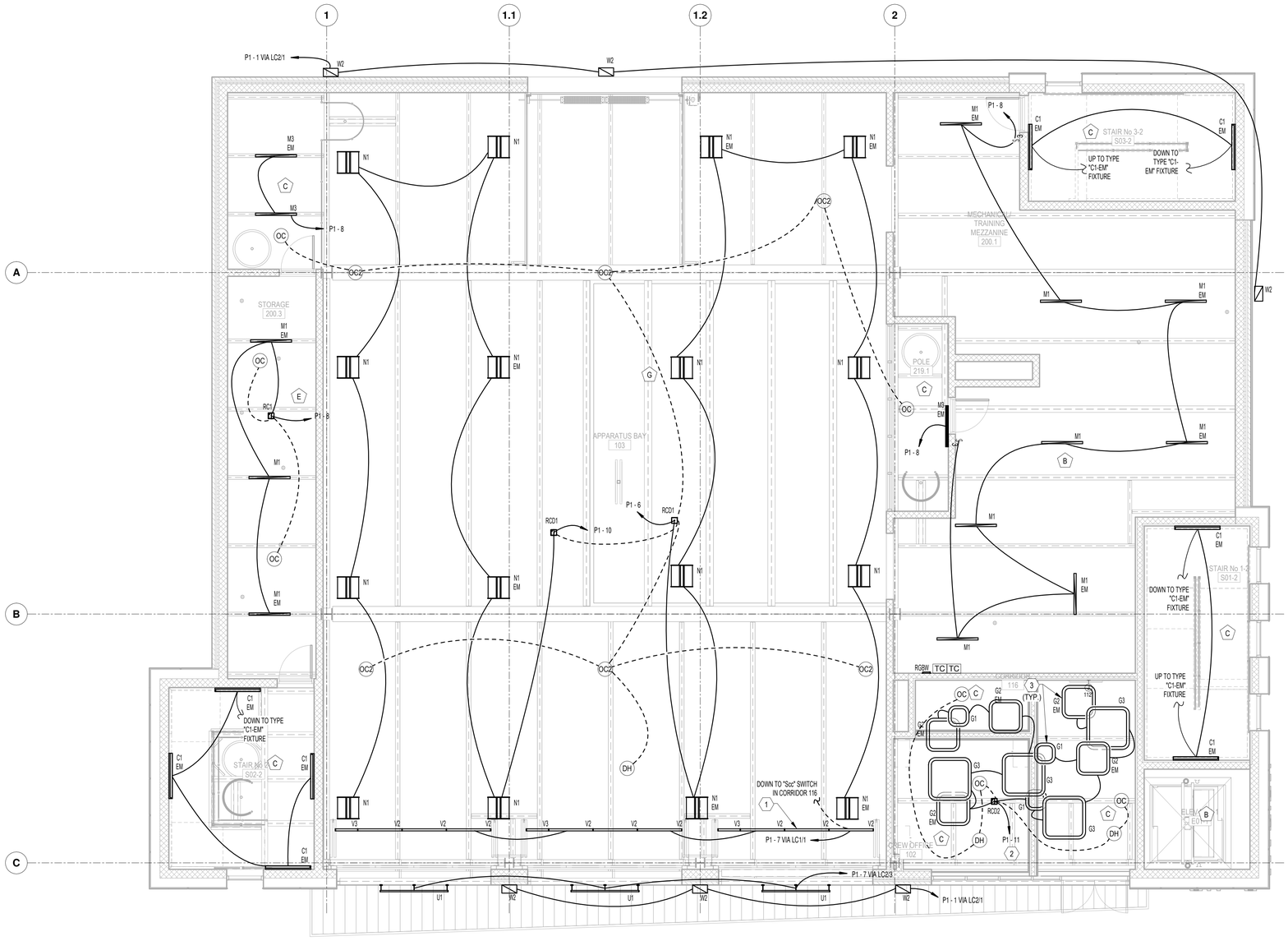
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR LIGHTING PLAN

SHEET NUMBER: E2.00

7/29/2021 2:32:10 PM



1 MEZZANINE LEVEL LIGHTING PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL LIGHTING NOTES

1. ALL LIGHTING INSTALLED IN PATHS OF EGRESS THAT ARE CONTROLLED BY OCCUPANCY SENSORS SHALL HAVE A FIRE ALARM CONTROL MODULE FURNISHED, INSTALLED, AND WIRED INTO THE LIGHTING CONTROLLER TO AUTOMATICALLY PUSH LIGHTING TO 100% ON IN EVENT OF FIRE ALARM SYSTEM ACTIVATION. E.C. SHALL FURNISH AND INSTALL A LMIO-100 INTERFACE DEVICE TO WORK WITH THE LIGHTING CONTROL SYSTEM AND FIRE ALARM SYSTEM INPUT. E.C. SHALL INSTALL ALL WIRING AND DEVICES PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. ALL LIGHTS LABELED "EM" SHALL BE FURNISHED WITH AN EXTRA #12 AWG WIRE FED UNSWITCHED FROM LIGHTING CIRCUIT FEEDING FIXTURE FOR CORRECT EMERGENCY OPERATION.
3. ALL ROOM CONTROLLERS AND OCCUPANCY SENSORS SHALL BE SET FOR 20 MIN. MAX VACANCY TIME.
4. ALL EXIT SIGNS SHALL BE FED UNSWITCHED FROM THE NEAREST LOCAL LIGHTING CIRCUIT IN AREA IN WHICH FIXTURE IS SERVING.
5. ALL WIRING SHOWN DASHED FROM ROOM CONTROLLERS REPRESENT LOW VOLTAGE CAT-5E WIRING. ALL DARK SOLID LINES SHOWN FROM ROOM CONTROLLERS REPRESENTS LINE VOLTAGE SWTICH LEGS. IF MULTIPLE SWITCH LEGS ARE SHOWN FROM ROOM CONTROLLER EACH IS FED FROM A SEPERATE RELAY INTERGRAL TO THE CONTROLLER. AS SUCH, EACH RELAY SHALL BE CONTROLLED BY IT'S OWN MANUAL CONTROL DEVICE, IF PRESENT IN THE AREA, AND SHALL BE PROGRAMMED TO BE OVERALL CONTROLLED BY THE OCCUPANCY SENSOR AS SHOWN IN LIGHTING CONTROL SCHEDULE.
6. E.C. SHALL COORDINATE MOUNTING HEIGHTS OF ALL LIGHT FIXTURES AND EXIT SIGNS IN FIELD WITH CEILING TYPES AND MECHANICAL EQUIPMENT.
7. REFER TO LIGHTING CONTROL SCHEME SCHEDULE FOR LIGHTING CONTROL SETTINGS. ALL SETTINGS SHALL BE COORDINATED WITH OWNER IN FIELD.
8. ALL CONDUITS SHALL BE INSTALLED IN BLOCK WALL AND SHALL NOT BE INSTALLED EXPOSED AT ANY POINT ALONG ANY BLOCK WALL SURFACE.
9. E.C. SHALL REFER TO LIGHTING CONTROL WIRING DIAGRAMS ON DRAWING E6.02 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.
10. ALL LIGHTING FIXTURES SHALL BE FED FROM A JUNCTION BOX WITH 6' WHIPS.
11. ROOM CONTROLLERS ARE SHOWN IN THEIR LOCATIONS FOR CIRCUITING CLARITY. E.C. SHALL FURNISH AND INSTALL ALL ROOM CONTROLLERS LOCATED IN ROOMS WITH WOOD SLAT CEILINGS IN ELECTRICAL ROOM.
12. ALL LOCATIONS SHOWN WITH MULTIPLE SWITCHES SHALL BE INSTALLED IN A MULTI-GANG BOX FOR QUANTITY OF DEVICES AS SHOWN ON PLANS. E.C. SHALL COORDINATE ALL LOCATIONS AND QUANTITIES WITH ELECTRICAL AND ARCHITECTURAL DRAWINGS.
13. ALL WALL MOUNTED OCCUPANCY/ VACANCY SENSORS, DAYLIGHT HARVESTERS AND SPEAKERS SHALL BE MOUNTED AT 8'-6" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWINGS.

KEYNOTES

1. E.C. SHALL FURNISH AND INSTALL RGBW CONTROLLER IN CREW OFFICE FOR CONTROL OF COLOR CHANGING FIXTURES ON SECOND FLOOR AS SHOWN. E.C. SHALL FURNISH AND INSTALL POWER OVER ETHERNET 8 PORT SWITCH FOR LOW-VOLTAGE CONTROL OF RGBW FIXTURES. E.C. SHALL FURNISH AND INSTALL ALL LOW-VOLTAGE CAT-5E WIRING FROM CONTROLLER TO SWITCH AND FROM CONTROLLER TO FIXTURES. E.C. SHALL FURNISH AND INSTALL POWER SUPPLY TO FIXTURES FROM CIRCUIT BREAKER IN PANEL AS SHOWN. E.C. SHALL COORDINATE ALL WORK WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. E.C. SHALL HAVE LIGHTING FIXTURES LOCATED IN CREW OFFICE, CORRIDOR 116 AND LOBBY PROGRAMMED TO DIM TO 10% WHEN UNOCCUPIED AND TO COME ON TO 100% OPERATION WHEN MOTION IS SENSED. DAYLIGHT HARVESTERS SHALL BE INSTALLED AS COORDINATED WITH LIGHTING CONTROLS VENDOR FOR CORRECT PLACEMENT.
3. E.C. SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR DIFFERENT MOUNTING HEIGHTS OF FIXTURE TYPES "G1", "G2", & "G3" IN CORRIDOR, LOBBY AND CREW OFFICE.

LIGHTING CONTROL SCHEME SCHEDULE

A	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR
B	MANUAL ON/MANUAL OFF	SINGLE POLE OR THREE POLE TOGGLE SWITCH
C	CIRCUIT BREAKER CONTROL, FIXTURES DIM TO 10% OUTPUT WHEN VACANT/ 100% OPERATION ON OCCUPANCY	CIRCUIT BREAKER
D	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), PATH OF EGRESS LIGHTING CONTROLLED BY OCCUPANCY SENSORS ARE TIED INTO FIRE ALARM SYSTEM FOR AUTOMATIC 100% ON OPERATION IN BUILDING SYSTEM FIRE ALARM EVENT	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER LMIO DEVICE
E	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER
F	MANUAL ON/MANUAL OFF/MANUAL DIMMING	SINGLE POLE DIGITAL 0-10V DIMMING SWITCH
G	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), MANUAL & AUTOMATIC DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLERS DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES
H	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER CEILING MOUNTED OCCUPANCY SENSOR (2) LOW-VOLTAGE DIMMING SWITCHES
J	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
K	PHOTOCELL/TIMECLOCK CONTROLLED, FLOOD LIGHT MANUAL SWITCH CONTROLLED	TIMECLOCK AND LIGHTING CONTACTOR, SINGLE POLE TOGGLE SWITCH
L	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE) RELAY 1, MANUAL ON/AUTOMATIC OFF RELAY 2	WALL MOUNTED DUAL RELAY TWO BUTTON PASSIVE INFRARED OCCUPANCY SENSOR.
M	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSORS CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES THREE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
N	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER

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SEAL:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

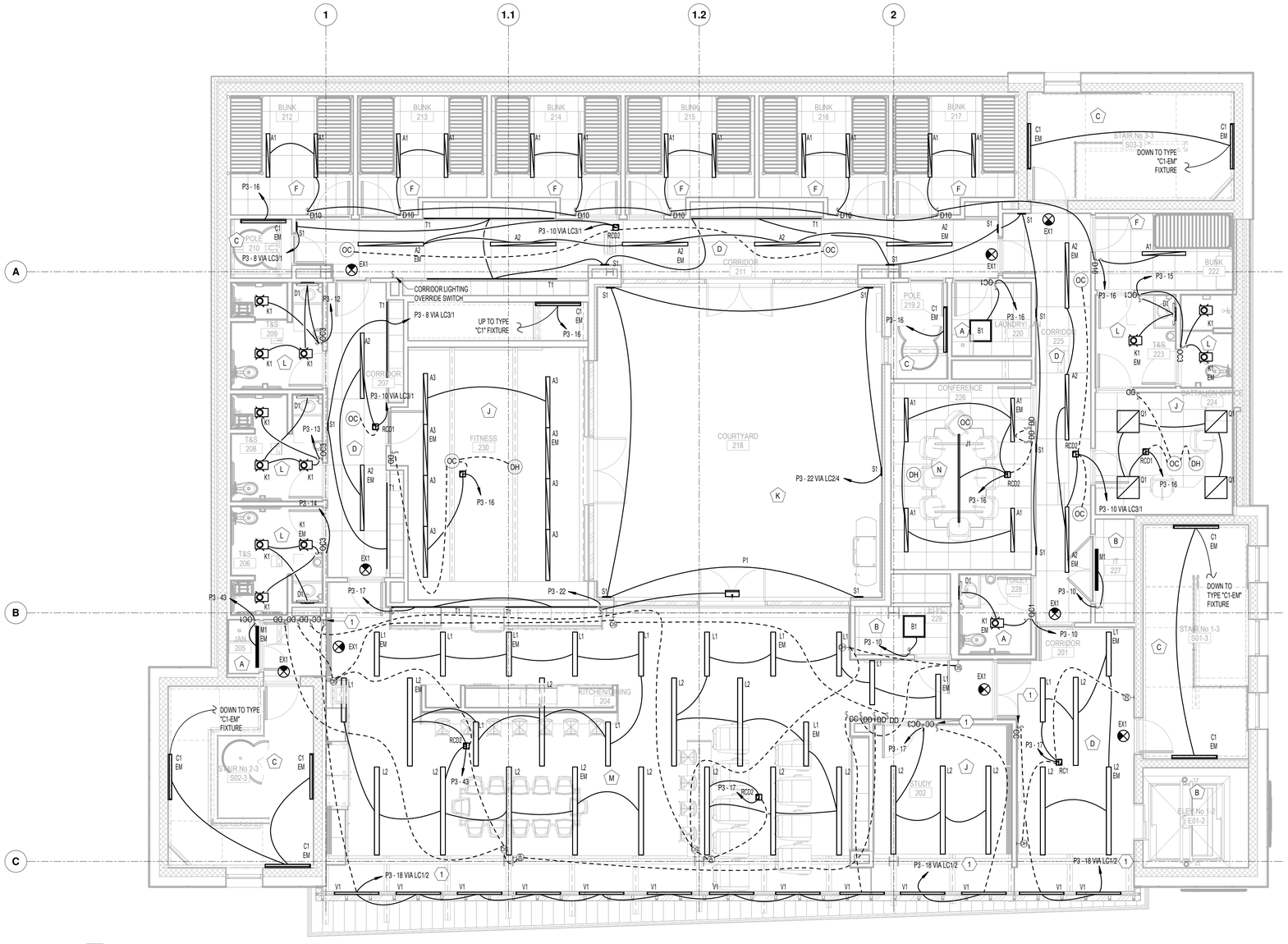
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE LEVEL LIGHTING PLAN

SHEET NUMBER: E2.01

7/2/2021 4:49:54 PM



1 SECOND FLOOR LIGHTING PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL LIGHTING NOTES

1. ALL LIGHTING INSTALLED IN PATHS OF EGRESS THAT ARE CONTROLLED BY OCCUPANCY SENSORS SHALL HAVE A FIRE ALARM CONTROL MODULE FURNISHED, INSTALLED, AND WIRED INTO THE LIGHTING CONTROLLER TO AUTOMATICALLY PUSH LIGHTING TO 100% ON IN EVENT OF FIRE ALARM SYSTEM ACTIVATION. E.C. SHALL FURNISH AND INSTALL A LMIO-100 INTERFACE DEVICE TO WORK WITH THE LIGHTING CONTROL SYSTEM AND FIRE ALARM SYSTEM INPUT. E.C. SHALL INSTALL ALL WIRING AND DEVICES PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. ALL LIGHTS LABELED "EM" SHALL BE FURNISHED WITH AN EXTRA #12 AWG WIRE FED UNSWITCHED FROM LIGHTING CIRCUIT FEEDING FIXTURE FOR CORRECT EMERGENCY OPERATION.
3. ALL ROOM CONTROLLERS AND OCCUPANCY SENSORS SHALL BE SET FOR 20 MIN. MAX VACANCY TIME.
4. ALL EXIT SIGNS SHALL BE FED UNSWITCHED FROM THE NEAREST LOCAL LIGHTING CIRCUIT IN AREA IN WHICH FIXTURE IS SERVING.
5. ALL WIRING SHOWN DASHED FROM ROOM CONTROLLERS REPRESENT LOW VOLTAGE CAT-5E WIRING. ALL DARK SOLID LINES SHOWN FROM ROOM CONTROLLERS REPRESENTS LINE VOLTAGE SWTICH LEGS. IF MULTIPLE SWITCH LEGS ARE SHOWN FROM ROOM CONTROLLER EACH IS FED FROM A SEPERATE RELAY INTERGRAL TO THE CONTROLLER. AS SUCH, EACH RELAY SHALL BE CONTROLLED BY IT'S OWN MANUAL CONTROL DEVICE, IF PRESENT IN THE AREA, AND SHALL BE PROGRAMMED TO BE OVERALL CONTROLLED BY THE OCCUPANCY SENSOR AS SHOWN IN LIGHTING CONTROL SCHEDULE.
6. E.C. SHALL COORDINATE MOUNTING HEIGHTS OF ALL LIGHT FIXTURES AND EXIT SIGNS IN FIELD WITH CEILING TYPES AND MECHANICAL EQUIPMENT.
7. REFER TO LIGHTING CONTROL SCHEME SCHEDULE FOR LIGHTING CONTROL SETTINGS. ALL SETTINGS SHALL BE COORDINATED WITH OWNER IN FIELD.
8. ALL CONDUITS SHALL BE INSTALLED IN BLOCK WALL AND SHALL NOT BE INSTALLED EXPOSED AT ANY POINT ALONG ANY BLOCK WALL SURFACE.
9. E.C. SHALL REFER TO LIGHTING CONTROL WIRING DIAGRAMS ON DRAWING E6.02 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.
10. ALL LIGHTING FIXTURES SHALL BE FED FROM A JUNCTION BOX WITH 6' WHIPS.
11. ROOM CONTROLLERS ARE SHOWN IN THEIR LOCATIONS FOR CIRCUITING CLARITY. E.C. SHALL FURNISH AND INSTALL ALL ROOM CONTROLLERS LOCATED IN ROOMS WITH WOOD SLAT CEILINGS IN ELECTRICAL ROOM.
12. ALL LOCATIONS SHOWN WITH MULTIPLE SWITCHES SHALL BE INSTALLED IN A MULTI-GANG BOX FOR QUANTITY OF DEVICES AS SHOWN ON PLANS. E.C. SHALL COORDINATE ALL LOCATIONS AND QUANTITIES WITH ELECTRICAL AND ARCHITECTURAL DRAWINGS.
13. ALL WALL MOUNTED OCCUPANCY/ VACANCY SENSORS, DAYLIGHT HARVESTERS AND SPEAKERS SHALL BE MOUNTED AT 8'-6" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWINGS.

KEYNOTES

1. E.C. SHALL FURNISH AND INSTALL IPLAYER RGBW CONTROLLER ON MECHANICAL MEZZANINE FOR CONTROL OF COLOR CHANGING FIXTURES ON MEZZANINE LEVEL AND SECOND FLOORS AS SHOWN ON LIGHTING PLANS. E.C. SHALL FURNISH AND INSTALL ALL LOW-VOLTAGE CAT-5E WIRING FROM CONTROLLER TO SWITCH AND FROM CONTROLLER TO FIXTURES. E.C. SHALL FURNISH AND INSTALL POWER SUPPLY TO FIXTURES FROM CIRCUIT BREAKER IN PANEL AS SHOWN. E.C. SHALL COORDINATE ALL WORK WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND TYPICAL CONNECTION WIRING DIAGRAM ON DRAWING E7.00. E.C. SHALL HAVE FIXTURES PROGRAMMED ON ZONES AS SHOWN WIRED TO THE "SCC" 6 BUTTON COLOR TRIGGERING SWITCHES.

LIGHTING CONTROL SCHEME SCHEDULE

A	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR
B	MANUAL ON/MANUAL OFF	SINGLE POLE OR THREE POLE TOGGLE SWITCH
C	CIRCUIT BREAKER CONTROL. FIXTURES DIM TO 10% OUTPUT WHEN VACANT/ 100% OPERATION ON OCCUPANCY	CIRCUIT BREAKER
D	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), PATH OF EGRESS LIGHTING CONTROLLED BY OCCUPANCY SENSORS ARE TIED INTO FIRE ALARM SYSTEM FOR AUTOMATIC 100% ON OPERATION IN BUILDING SYSTEM FIRE ALARM EVENT	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER LMIO DEVICE
E	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE)	CEILING MOUNTED OCCUPANCY SENSOR SINGLE RELAY ON/OFF ROOM CONTROLLER
F	MANUAL ON/MANUAL OFF/MANUAL DIMMING	SINGLE POLE DIGITAL 0-10V DIMMING SWITCH
G	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE), MANUAL & AUTOMATIC DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLERS DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES
H	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING	CEILING MOUNTED OCCUPANCY SENSOR DUAL RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER CEILING MOUNTED OCCUPANCY SENSOR (2) LOW-VOLTAGE DIMMING SWITCHES
J	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
K	PHOTOCELL/TIMECLOCK CONTROLLED, FLOOD LIGHT MANUAL SWITCH CONTROLLED	TIMECLOCK AND LIGHTING CONTACTOR, SINGLE POLE TOGGLE SWITCH
L	AUTOMATIC ON/ AUTOMATIC OFF (OCCUPANCY MODE) RELAY 1, MANUAL ON/AUTOMATIC OFF RELAY 2	WALL MOUNTED DUAL RELAY TWO BUTTON PASSIVE INFRARED OCCUPANCY SENSOR
M	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), AUTOMATIC CONTINUOUS DIMMING, MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSORS CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCHES THREE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER
N	MANUAL ON/ AUTOMATIC OFF (VACANCY MODE), MANUAL DIMMING SWITCH	CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED DAYLIGHT HARVESTER PHOTOCELL LOW-VOLTAGE DIMMING SWITCH SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER

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PE084123
PENNSYLVANIA

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

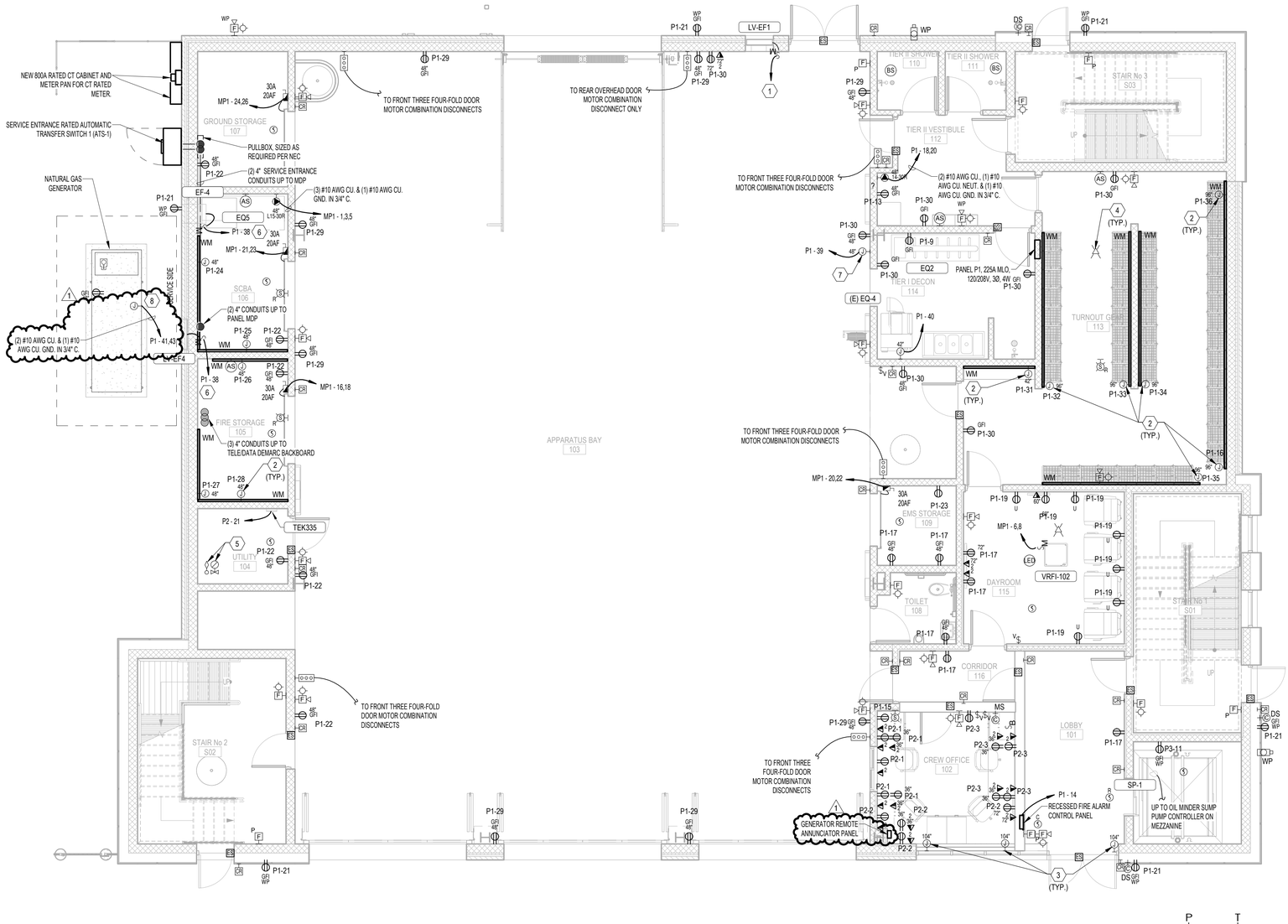
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR LIGHTING PLAN

SHEET NUMBER: E2.02

7/2/2021 4:50:11 PM



1 FIRST FLOOR POWER PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL POWER NOTES

1. E.C. SHALL COORDINATE ALL DEVICE LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWING AND OWNER'S ONSITE REPRESENTATIVE BEFORE WORK COMMENCES.
2. ALL ITEMS SHOWN DARK AND SOLID REPRESENTS NEW WORK TO BE FURNISHED AND FULLY INSTALLED BY ELECTRICAL CONTRACTOR. ALL ITEMS SHOWN LIGHT AND SOLID REPRESENT EQUIPMENT AND WORK TO BE PERFORMED BY ANOTHER TRADE.
3. ALL RECEPTACLES MOUNTED TO EXTERIOR OF BUILDING SHALL BE INSTALLED SURFACE MOUNTED IN WEATHERPROOF BOX W/ IN USE WEATHERPROOF COVER, CONDUIT AND BRANCH CIRCUIT SHALL BE RUN CONCEALED IN BLOCK WALL. E.C. SHALL PROVIDE A BEAD OF CAULK AROUND THE PERIMETER OF THE BOX WHERE IT MEETS WALL. E.C. SHALL COORDINATE EXACT COLOR OF CAULK WITH ARCHITECT IN FIELD.
4. ALL LOW-VOLTAGE TELE/DATA WIRING, LOW-VOLTAGE WIRING DEVICES, COVERPLATES, HEAD-END EQUIPMENT, DATA RACKS AND OTHER EQUIPMENT ASSOCIATED WITH SECURITY AND TELE/DATA SYSTEMS INSTALLATIONS SHALL BE FURNISHED AND INSTALLED BY OWNER'S IT/SECURITY VENDOR/CONTRACTORS. E.C. SHALL BE RESPONSIBLE FOR INSTALLING J-HOOKS ABOVE CEILING AND CONDUIT STUB-UPS TO ABOVE CEILING FROM WALL MOUNTED LOW-VOLTAGE BOXES. E.C. SHALL FURNISH AND INSTALL CONDUITS WITH PULLSTRINGS.
6. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL SYSTEMS AND EQUIPMENT PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. E.C. SHALL FURNISH AND INSTALL ALL ACCESSORY EQUIPMENT REQUIRED, BUT NOT PROVIDED WITH EQUIPMENT, TO MAKE SYSTEMS AND EQUIPMENT FULLY COMPLETE AND 100% OPERATIONAL.
7. ALL RECEPTACLES SHOWN AS GFCI THAT CANNOT BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION FOR RESET FUNCTIONALITY SHALL BE FURNISHED AS A STANDARD RECEPTACLE FED FROM A GFCI TYPE BREAKER.
8. E.C. SHALL REFER TO DRAWING E0.00 FOR LEGEND INFORMATION.
9. E.C. SHALL UTILIZE ROOF CURBS INSTALLED WITH MECHANICAL EQUIPMENT TO RUN ALL ELECTRICAL WIRING TO MECHANICAL EQUIPMENT ON ROOF. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH MECHANICAL CONTRACTOR.
10. ALL PANELBOARDS AND WIRING DEVICES SHOWN ON BLOCK WALLS SHALL BE FURNISHED AND INSTALLED RECESSED FLUSH WITH BLOCK WALL. ALL CONDUITS AND WIRING FEEDING DEVICES SHALL BE INSTALLED IN HOLLOW OF BLOCK WALL. E.C. SHALL COORDINATE ALL WORK WITH MASONS BEFORE CONSTRUCTION COMMENCES.
11. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL DISCONNECTS SHOWN DARK AND SOLID ON MECHANICAL EQUIPMENT. ALL MECHANICAL EQUIPMENT SHOWN ON PLANS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL PRIME. E.C. SHALL FURNISH AND INSTALL ALL BRANCH CIRCUITS, CONDUITS, DISCONNECTS AND TERMINATIONS ON EQUIPMENT. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO STARTING PROJECT.
12. FOR ALL LOCATIONS SHOWN WHERE A RECEPTACLE AND DATA OUTLET ARE MOUNTED HIGH FOR A MONITOR OR TV E.C. SHALL FURNISH AND INSTALL A RECESSED TELEVISION BOX MODEL #TV2MW AS MANUFACTURED BY WIREMOLD LEGRANDE
13. ALL DEVICES SHOWN CEILING MOUNTED IN KITCHEN/DAYROOM, STUDY AND LOBBY WITH WOOD SLAT CEILINGS SHALL BE INSTALLED ABOVE WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH ARCHITECTURAL DRAWINGS.
14. E.C. SHALL ENSURE ALL LOW-VOLTAGE, DATA, AND COAX CABLE THAT CROSSES ANY EXPOSED CEILING SHALL BE INSTALLED IN EMT.

KEYNOTES

1. E.C. SHALL INTERLOCK EXHAUST FAN 1 LOUVER WITH THE OPERATION OF EXHAUST FAN 1. E.C. SHALL FURNISH AND INSTALL ALL EQUIPMENT REQUIRED TO MAKE CONNECTIONS. E.C. SHALL REFER TO EXHAUST FAN/LOUVER WIRING DIAGRAM ON DRAWING E6.02.
2. E.C. SHALL FURNISH AND INSTALL JUNCTION BOX RECESSED FLUSH WITH FACE OF WALL FOR CONNECTIONS TO WIREMOLD RACEWAY AS SHOWN ON PLANS. E.C. SHALL COORDINATE ALL MOUNTING HEIGHTS AND LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWINGS. E.C. SHALL MOUNT ALL WIREMOLD AT HIEGHTS OF JUNCTION BOXES FEEDING THEM AS SHOWN ON PLANS.
3. E.C. SHALL FURNISH AND INSTALL JUNCTIONS BOXES RECESSED FLUSH WITH FACE OF SURFACE BEING INSTALLED IN FOR POWERING AUTOMATED BLINDS FROM BLIND CONTROL PANELS LOCATED IN ELECTRIC ROOM. E.C. SHALL FURNISH AND INSTALL A BRANCH CIRCUIT CONSISTING OF (4) #14 AWG CU. WIRE IN 1/2" CONDUIT FROM CONTROL PANEL TO EACH MOTOR. EACH MOTOR SHALL HAVE A DEDICATED HOMERUN TO CONTROL PANEL. E.C. SHALL COORDINATE ALL LOCATIONS OF JUNCTION BOXES IN FIELD WITH BLIND LOCATIONS AND ARCHITECTURAL DRAWINGS. E.C. SHALL FURNISH AND INSTALL CAT-5E CABLING FROM CONTROL PANEL TO EACH MOTOR FOR CONTROL OF MOTORS. E.C. SHALL FURNISH ALL CAT-5E CABLE FOR LOW-VOLTAGE CONNECTIONS OF BLIND CONTROL PANELS AND LOW VOLTAGE LOCAL ROOM BLIND CONTROLS. MOTORIZED BLIND CONTROL PANEL SHALL BE ITEM #1811416 (IGCAN1) AS MANUFACTURED BY HUNTERDOUGLAS ARCHITECTURAL. E.C. SHALL REFER TO DRAWING E6.02 FOR MOTORIZED BLIND CONTROL PANEL CONNECTION DIAGRAM FOR MORE INFORMATION FIRST FLOOR BLINDS SHALL BE FED AND CONTROLLED FROM BLIND CONTROL PANEL INSTALLED ON MEZZANINE LEVEL.
4. E.C. SHALL FURNISH AND INSTALL WIRELESS ACCESS POINT ON CEILING. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH OTHER TRADE'S WORK IN THE AREA.
5. E.C. SHALL WIRE FIRE ALARM FLOW AND TAMPER SWITCHES INTO FIRE ALARM SYSTEM. E.C. SHALL COORDINATE ALL LOCATIONS AND QUANTITIES OF FLOW AND TAMPER SWITCHES IN FIELD WITH SPRINKLER CONTRACTOR.
6. E.C. SHALL REFER TO EF4/LV-EF4 WIRING CONTROL DIAGRAM ON DRAWING E6.02 FOR MORE INFORMATION.
7. E.C. SHALL FURNISH AND INSTALL JUNCTION BOX RECESSED FLUSH WITH FACE OF WALL FOR INSTALLATION OF DISTECH CONTROLLER. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH MECHANICAL CONTRACTOR.
8. E.C. SHALL FEED GENERATOR TERMINAL STRIP FOR POWER TO ALL GENERATOR ACCESSORIES LOCATED IN ENCLOSURE. E.C. SHALL COORDINATE ALL WORK IN FIELD.

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT W. FRENCK PE084123

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088

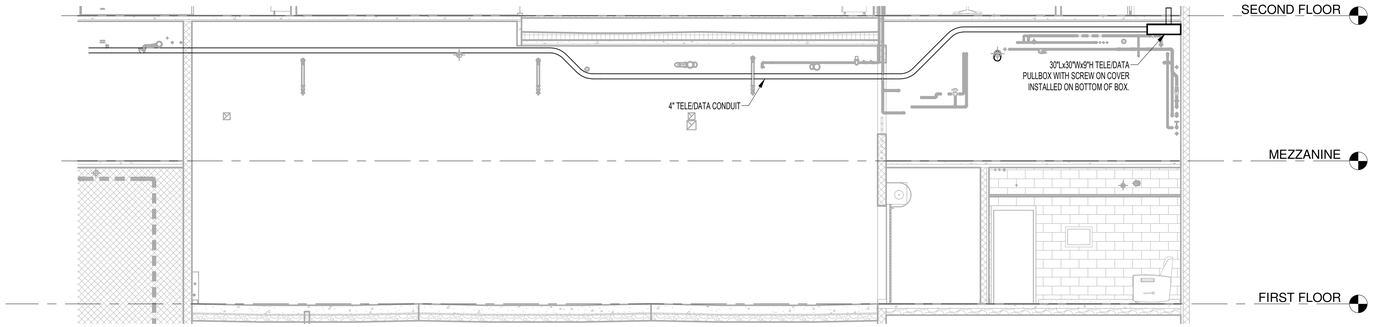
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: FIRST FLOOR POWER PLANS

SHEET NUMBER: E3.00

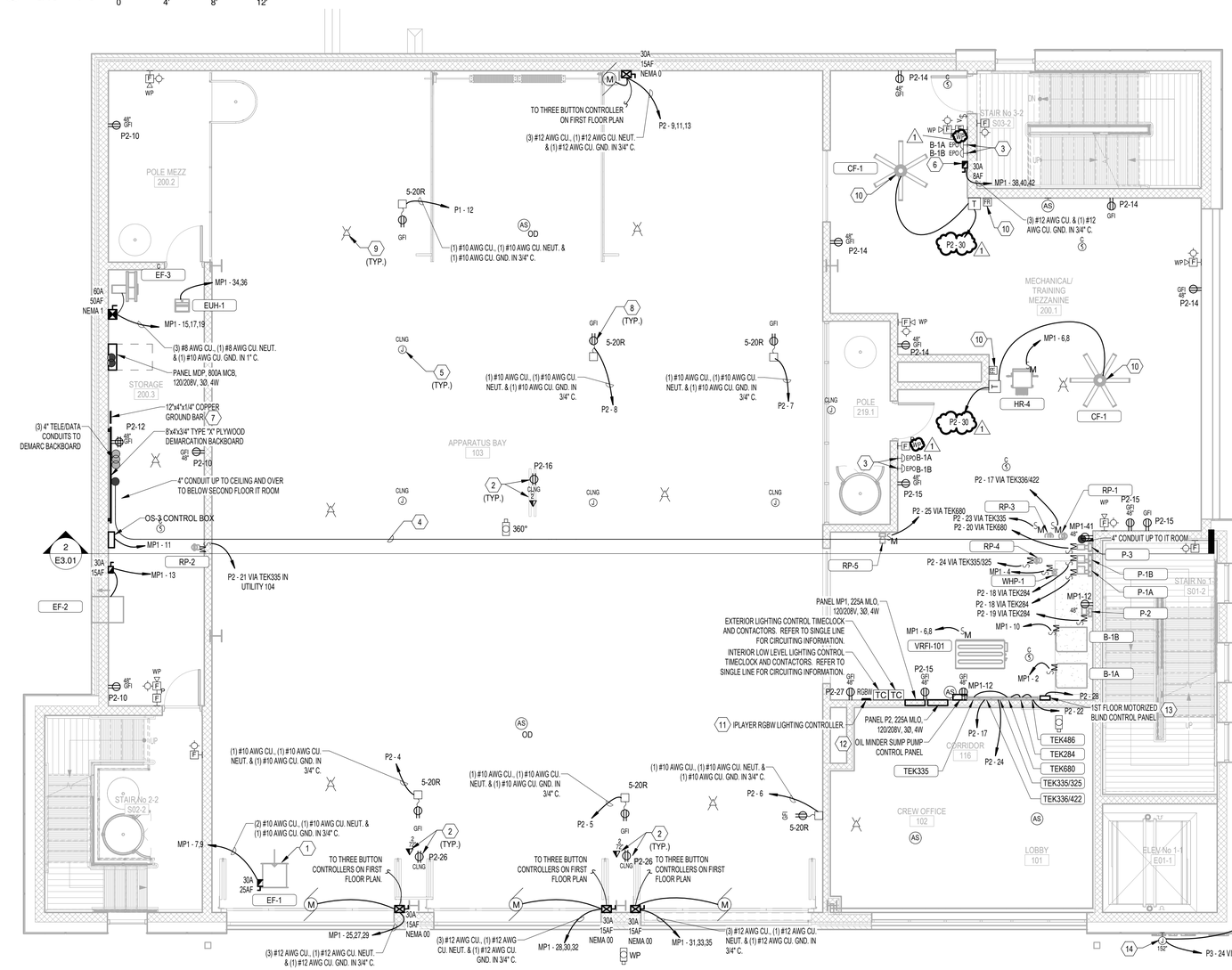
8/24/2021 5:49:19 PM



2 TELE/DATA CONDUIT RUN ELEVATION

3/16" = 1'-0"

0 4' 8' 12'



1 MEZZANINE LEVEL POWER PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL POWER NOTES

1. E.C. SHALL COORDINATE ALL DEVICE LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWING AND OWNER'S ONSITE REPRESENTATIVE BEFORE WORK COMMENCES.
2. ALL ITEMS SHOWN DARK AND SOLID REPRESENTS NEW WORK TO BE FURNISHED AND FULLY INSTALLED BY ELECTRICAL CONTRACTOR. ALL ITEMS SHOWN LIGHT AND SOLID REPRESENT EQUIPMENT AND WORK TO BE PERFORMED BY ANOTHER TRADE.
3. ALL RECEPTACLES MOUNTED TO EXTERIOR OF BUILDING SHALL BE INSTALLED SURFACE MOUNTED IN WEATHERPROOF BOX W/ IN USE WEATHERPROOF COVER. CONDUIT AND BRANCH CIRCUIT SHALL BE RUN CONCEALED IN BLOCK WALL. E.C. SHALL PROVIDE A BEAD OF CAULK AROUND THE PERIMETER OF THE BOX WHERE IT MEETS WALL. E.C. SHALL COORDINATE EXACT COLOR OF CAULK WITH ARCHITECT IN FIELD.
4. ALL LOW-VOLTAGE TELE/DATA WIRING, LOW-VOLTAGE WIRING DEVICES, COVERPLATES, HEAD-END EQUIPMENT, DATA RACKS AND OTHER EQUIPMENT ASSOCIATED WITH SECURITY AND TELE/DATA SYSTEMS INSTALLATIONS SHALL BE FURNISHED AND INSTALLED BY OWNER'S IT/SECURITY VENDOR/CONTRACTORS. E.C. SHALL BE RESPONSIBLE FOR INSTALLING J-HOOKS ABOVE CEILING AND CONDUIT STUB-UPS TO ABOVE CEILING FROM WALL MOUNTED LOW-VOLTAGE BOXES. E.C. SHALL FURNISH AND INSTALL CONDUITS WITH PULLSTRINGS.
6. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL SYSTEMS AND EQUIPMENT PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. E.C. SHALL FURNISH AND INSTALL ALL ACCESSORY EQUIPMENT REQUIRED, BUT NOT PROVIDED WITH EQUIPMENT, TO MAKE SYSTEMS AND EQUIPMENT FULLY COMPLETE AND 100% OPERATIONAL.
7. ALL RECEPTACLES SHOWN AS GFCI THAT CANNOT BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION FOR RESET FUNCTIONALITY SHALL BE FURNISHED AS A STANDARD RECEPTACLE FED FROM A GFCI TYPE BREAKER.
8. E.C. SHALL REFER TO DRAWING E0.00 FOR LEGEND INFORMATION.
9. E.C. SHALL UTILIZE ROOF CURBS INSTALLED WITH MECHANICAL EQUIPMENT TO RUN ALL ELECTRICAL WIRING TO MECHANICAL EQUIPMENT ON ROOF. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH MECHANICAL CONTRACTOR.
10. ALL PANELBOARDS AND WIRING DEVICES SHOWN ON BLOCK WALLS SHALL BE FURNISHED AND INSTALLED RECESSED FLUSH WITH BLOCK WALL. ALL CONDUITS AND WIRING FEEDING DEVICES SHALL BE INSTALLED IN HOLLOW OF BLOCK WALL. E.C. SHALL COORDINATE ALL WORK WITH MASONS BEFORE CONSTRUCTION COMMENCES.
11. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL DISCONNECTS SHOWN DARK AND SOLID ON MECHANICAL EQUIPMENT. ALL MECHANICAL EQUIPMENT SHOWN ON PLANS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL PRIME. E.C. SHALL FURNISH AND INSTALL ALL BRANCH CIRCUITS, CONDUITS, DISCONNECTS AND TERMINATIONS ON EQUIPMENT. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO STARTING PROJECT.
12. FOR ALL LOCATIONS SHOWN WHERE A RECEPTACLE AND DATA OUTLET ARE MOUNTED HIGH FOR A MONITOR OR TV E.C. SHALL FURNISH AND INSTALL A RECESSED TELEVISION BOX MODEL #TV2MW AS MANUFACTURED BY WIREMOLD LEGRANDE
13. ALL DEVICES SHOWN CEILING MOUNTED IN KITCHEN/DAYROOM, STUDY AND LOBBY WITH WOOD SLAT CEILINGS SHALL BE INSTALLED ABOVE WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH ARCHITECTURAL DRAWINGS.
14. E.C. SHALL ENSURE ALL LOW-VOLTAGE, DATA, AND COAX CABLE THAT CROSSES ANY EXPOSED CEILING SHALL BE INSTALLED IN EMT.

KEYNOTES

1. E.C. SHALL INTERLOCK EXHAUST FAN 1 LOUVER WITH THE OPERATION OF EXHAUST FAN 1. E.C. SHALL FURNISH AND INSTALL ALL EQUIPMENT REQUIRED TO MAKE CONNECTIONS. E.C. SHALL REFER TO EXHAUST FAN/LOUVER WIRING DIAGRAM ON DRAWING E7.00.
2. E.C. SHALL FURNISH AND INSTALL BOXES FOR DATA AND POWER OUTLETS AT BASE OF MONITOR DISPLAY HANGERS. E.C. SHALL COORDINATE ALL WORK AND LOCATIONS IN FIELD WITH MONITOR DISPLAY INSTALLATION CONTRACTOR. TYPICAL FOR ALL PENDANT DISPLAY MONITORS.
3. E.C. SHALL FURNISH AND INSTALL IN THE POWER CIRCUIT OF EACH BOILER 1 AND 2 AN EMERGENCY POWER OFF BUTTON AT THE EXIT LOCATIONS OF THE MEZZANINE LEVEL AS SHOWN. E.C. SHALL INSTALL EPO BUTTON PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PER AHJ REQUIREMENTS.
4. E.C. SHALL RUN A 4" CONDUIT WITH (3) 1" INNER DUCTS WITH PULLSTRINGS FROM MAIN TELE/DATA DEMARC BACKBOARD LOCATED ON MEZZANINE LEVEL STORAGE ROOM 200.3 OVER ALONG MEZZANINE CEILING AND THEN POP-UP INTO SECOND FLOOR IT/DATA ROOM. E.C. SHALL FURNISH AND INSTALL A CONDUIT SLEEVE THROUGH SECOND FLOOR FROM MEZZANINE LEVEL AND FIRE CAULK IN BETWEEN CONDUIT INSIDE OF SLEEVE WITH APPROVED FIRE CAULK. E.C. SHALL UTILIZE FIRE CAULK AROUND PIPE SLEEVE AND FLOOR BEING PENETRATED.
5. E.C. SHALL FURNISH AND INSTALL JUNCTION BOXES ON STEEL STRUCTURE AT MEZZANINE LEVEL FOR FUTURE USE. E.C. SHALL FURNISH AND INSTALL 3/4" CONDUIT WITH PULLSTRINGS TO EACH JUNCTION BOX SHOWN CEILING MOUNTED OVER APPARATUS BAY (TYPICAL OF 6).
6. E.C. SHALL FURNISH AND INSTALL 30A, 3 POLE FUSED DISCONNECT FOR POWER TO GANTRY CRANE MOTOR. E.C. SHALL COORDINATE EXACT LOCATION OF FUSED DISCONNECT IN FIELD WITH GANTRY TRANE INSTALLATION CONTRACTOR PRIOR TO INSTALLING FUSED DISCONNECT.
7. E.C. SHALL FURNISH AND INSTALL GROUND BAR ON WALL ADJACENT TO TELE/DATA DEMARCATION BACKBOARD AND SHALL PROVIDE BARE #4 CU. WIRE GROUNDED TO BUILDING STEEL. ALL TELE/DATA CONDUITS AND TELE/DATA EQUIPMENT SHALL BE GROUNDED TO TELE/DATA GROUND BAR. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH TELE/DATA CONTRACTOR.
8. E.C. SHALL FURNISH AND INSTALL ELECTRIC CORD REEL SECURELY TO BUILDING STRUCTURE. E.C. SHALL FURNISH AND CONFIGURE BALLSTOP FOR PROPER USAGE AND LET DOWN OF ELECTRICAL CORD FROM REEL.
9. E.C. SHALL FURNISH AND INSTALL WIRELESS ACCESS POINT ON APPARATUS BAY CEILING. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH OTHER TRADE'S WORK IN THE AREA.
10. E.C. SHALL WIRE CEILING FANS FROM FAN CONTROLLER ON WALL AS SHOWN. E.C. SHALL CONNECT CEILING FAN WIRING TO A 15A, 120V RATED FIRE ALARM CONTROL MODULE FOR AUTOMATIC SHUTDOWN OF CEILING FANS IN A BUILDING SYSTEM FIRE ALARM ACTIVATION EVENT. E.C. SHALL COORDINATE ALL FIRE ALARM WORK IN FIELD WITH FIRE ALARM CONTRACTOR.
11. E.C. SHALL FURNISH AND INSTALL IPLAYER RGBW CONTROLLER ON MEZZANINE LEVEL MOUNTED ABOVE TIMECLOCK. E.C. SHALL PROVIDE ALL COMMISSIONING OF RGBW CONTROLLER AND LIGHTING FIXTURES BY A FACTORY AUTHORIZED COMMISSIONING AGENT. E.C. SHALL PROVIDE ALL CAT-5E CABLING AND 6 BUTTON RGBW LOCAL CONTROL DEVICES AS SHOWN ON PLANS.
12. E.C. SHALL FURNISH AND INSTALL A 4" CONDUIT FROM MEZZANINE LEVEL DOWN TO ELEVATOR SUMP PUMP LOCATION FOR SUMP PUMP WIRING. E.C. SHALL COORDINATE ALL WORK AND LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO COMMENCING WORK.
13. E.C. SHALL FURNISH AND INSTALL MOTORIZED BLIND CONTROL PANEL ON MEZZANINE LEVEL FOR POWER AND CONTROL OF FIRST FLOOR CREW OFFICE AND LOBBY MOTORIZED BLINDS. E.C. SHALL COORDINATE ALL WORK IN FIELD. MOTORIZED BLIND CONTROL PANEL SHALL BE ITEM #1811416 (IGC4N1) AS MANUFACTURED BY HUNTERDOUGLAS ARCHITECTURAL. E.C. SHALL REFER TO DRAWING E6.02 FOR MOTORIZED BLIND CONTROL PANEL CONNECTION DIAGRAM FOR MORE INFORMATION.
14. E.C. SHALL COORDINATE EXACT HEIGHT OF JUNCTION BOXES WITH ARCHITECTURAL DRAWINGS. E.C. SHALL FURNISH AND INSTALL JUNCTION BOXES FLUSH WITH FACE OF WALL IN LOCATIONS AS COORDINATED WITH SIGNAGE VENDOR. E.C. SHALL RUN ALL CONDUIT INSIDE OF BLOCK WALLS TO MAKE CONNECTIONS TO BUILDING SIGNAGE.

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SEAL:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/2 1

PROJECT NUMBER: 20-088

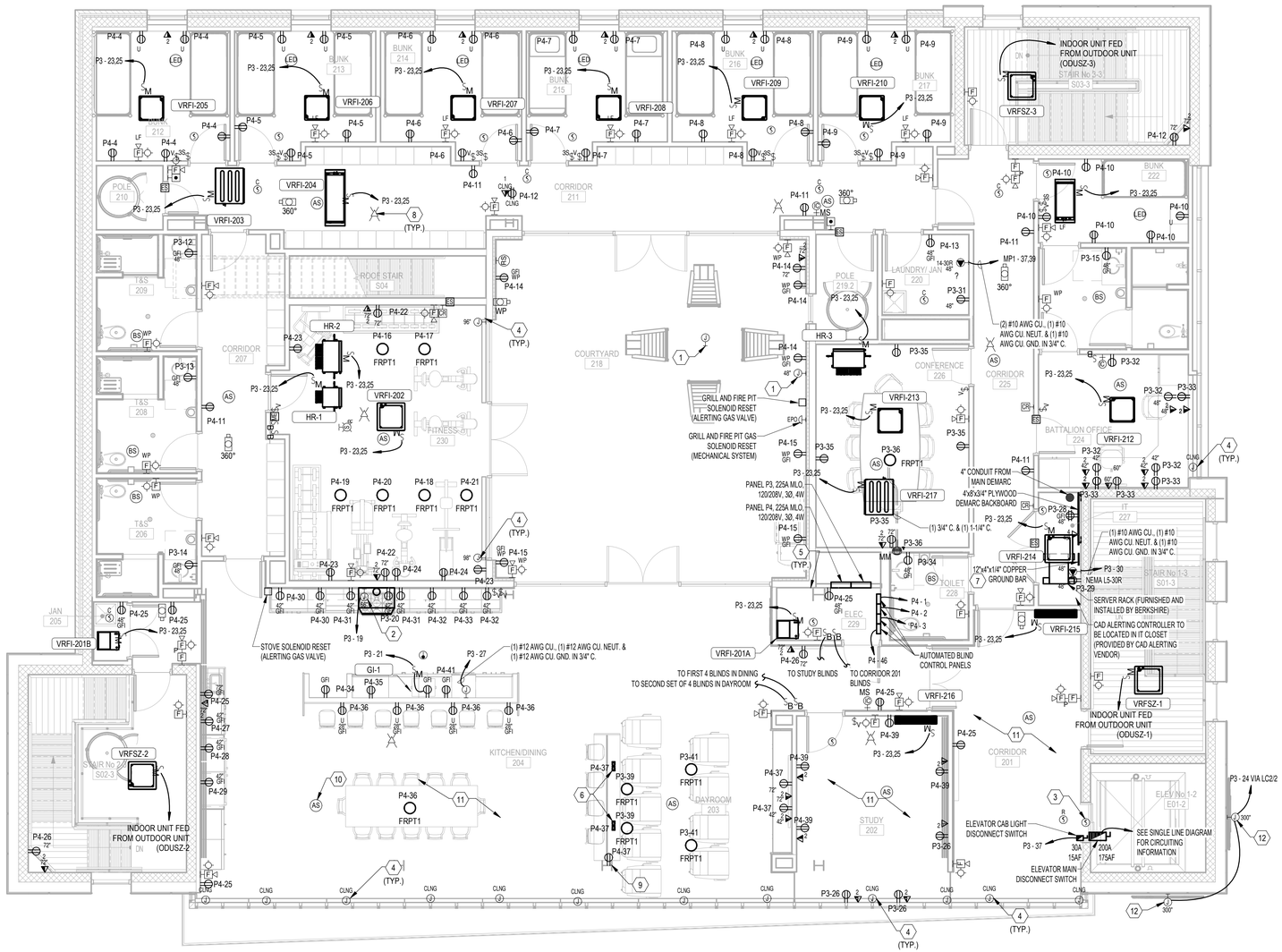
PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: MEZZANINE LEVEL POWER PLANS

SHEET NUMBER: E3.01

8/24/2021 5:49:33 PM



1 SECOND FLOOR POWER PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL POWER NOTES

1. E.C. SHALL COORDINATE ALL DEVICE LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWING AND OWNER'S ONSITE REPRESENTATIVE BEFORE WORK COMMENCES.
2. ALL ITEMS SHOWN DARK AND SOLID REPRESENTS NEW WORK TO BE FURNISHED AND FULLY INSTALLED BY ELECTRICAL CONTRACTOR. ALL ITEMS SHOWN LIGHT AND SOLID REPRESENT EQUIPMENT AND WORK TO BE PERFORMED BY ANOTHER TRADE.
3. ALL RECEPTACLES MOUNTED TO EXTERIOR OF BUILDING SHALL BE INSTALLED SURFACE MOUNTED IN WEATHERPROOF BOX W/ IN USE WEATHERPROOF COVER, CONDUIT AND BRANCH CIRCUIT SHALL BE RUN CONCEALED IN BLOCK WALL. E.C. SHALL PROVIDE A BEAD OF CAULK AROUND THE PERIMETER OF THE BOX WHERE IT MEETS WALL. E.C. SHALL COORDINATE EXACT COLOR OF CAULK WITH ARCHITECT IN FIELD.
4. ALL LOW-VOLTAGE TELE/DATA WIRING, LOW-VOLTAGE WIRING DEVICES, COVERPLATES, HEAD-END EQUIPMENT, DATA RACKS AND OTHER EQUIPMENT ASSOCIATED WITH SECURITY AND TELE/DATA SYSTEMS INSTALLATIONS SHALL BE FURNISHED AND INSTALLED BY OWNER'S IT/SECURITY VENDOR/CONTRACTORS. E.C. SHALL BE RESPONSIBLE FOR INSTALLING J-HOOKS ABOVE CEILING AND CONDUIT STUB-UPS TO ABOVE CEILING FROM WALL MOUNTED LOW-VOLTAGE BOXES. E.C. SHALL FURNISH AND INSTALL CONDUITS WITH PULLSTRINGS.
6. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL SYSTEMS AND EQUIPMENT PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. E.C. SHALL FURNISH AND INSTALL ACCESSORY EQUIPMENT REQUIRED, BUT NOT PROVIDED WITH EQUIPMENT, TO MAKE SYSTEMS AND EQUIPMENT FULLY COMPLETE AND 100% OPERATIONAL.
7. ALL RECEPTACLES SHOWN AS GFCI THAT CANNOT BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION FOR RESET FUNCTIONALITY SHALL BE FURNISHED AS A STANDARD RECEPTACLE FED FROM A GFCI TYPE BREAKER.
8. E.C. SHALL REFER TO DRAWING E0.00 FOR LEGEND INFORMATION.
9. E.C. SHALL UTILIZE ROOF CURBS INSTALLED WITH MECHANICAL EQUIPMENT TO RUN ALL ELECTRICAL WIRING TO MECHANICAL EQUIPMENT ON ROOF. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH MECHANICAL CONTRACTOR.
10. ALL PANELBOARDS AND WIRING DEVICES SHOWN ON BLOCK WALLS SHALL BE FURNISHED AND INSTALLED RECESSED FLUSH WITH BLOCK WALL. ALL CONDUITS AND WIRING FEEDING DEVICES SHALL BE INSTALLED IN HOLLOW OF BLOCK WALL. E.C. SHALL COORDINATE ALL WORK WITH MASONS BEFORE CONSTRUCTION COMMENCES.
11. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL DISCONNECTS SHOWN DARK AND SOLID ON MECHANICAL EQUIPMENT. ALL MECHANICAL EQUIPMENT SHOWN ON PLANS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL PRIME. E.C. SHALL FURNISH AND INSTALL ALL BRANCH CIRCUITS, CONDUITS, DISCONNECTS AND TERMINATIONS ON EQUIPMENT. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO STARTING PROJECT.
12. FOR ALL LOCATIONS SHOWN WHERE A RECEPTACLE AND DATA OUTLET ARE MOUNTED HIGH FOR A MONITOR OR TV E.C. SHALL FURNISH AND INSTALL A RECESSED TELEVISION BOX MODEL #TV2MW AS MANUFACTURED BY WIREMOLD LEGRANDE
13. ALL DEVICES SHOWN CEILING MOUNTED IN KITCHEN/DAYROOM, STUDY AND LOBBY WITH WOOD SLAT CEILINGS SHALL BE INSTALLED ABOVE WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH ARCHITECTURAL DRAWINGS.
14. E.C. SHALL ENSURE ALL LOW-VOLTAGE, DATA, AND COAX CABLE THAT CROSSES ANY EXPOSED CEILING SHALL BE INSTALLED IN EMT.

KEYNOTES

1. E.C. SHALL FURNISH AND INSTALL A JUNCTION BOX WITH CONDUIT RUN TO LOCATION OF FIREPIT ON/OFF SWITCH. E.C. SHALL FURNISH AND INSTALL CONDUIT FROM SWITCH LOCATION DOWN TO MEZZANINE LEVEL CEILING AND RUN OVER TO LOCATION OF PIT. CONDUIT SHALL BE PROVIDED WITH PULLSTRING. E.C. SHALL LEAVE BOX WITH BLANK COVERPLATE FOR FUTURE USE. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR.
2. E.C. SHALL FURNISH AND INSTALL A JUNCTION BOX MOUNTED RECESSED FLUSH WITH FACE OF WALL FOR POWER TO KITCHEN EXHAUST HOOD. E.C. SHALL FURNISH AND INSTALL ALL WIRING AS SHOWN FOR EXHAUST HOOD CONNECTIONS TO FIRE ALARM SYSTEM AND SHUNT TRIP CIRCUIT BREAKER FEEDING STOVE. E.C. SHALL COORDINATE ALL WORK WITH INSTALLATION DETAIL ON DRAWING E6.01
3. SMOKE DETECTOR SHALL BE INSTALLED TO SERVE ELEVATOR MACHINE ROOM CONTROL PANEL. E.C. SHALL COORDINATE EXACT LOCATION WITH FIRE MARSHAL, ELEVATOR VENDOR AND FIRE ALARM CONTRACTOR IN FIELD.
4. E.C. SHALL FURNISH AND INSTALL JUNCTIONS BOXES RECESSED FLUSH WITH FACE OF SURFACE BEING INSTALLED IN FOR POWERING AUTOMATED BLINDS FROM BLIND CONTROL PANELS LOCATED IN ELECTRIC ROOM. E.C. SHALL FURNISH AND INSTALL A BRANCH CIRCUIT CONSISTING OF (4) #14 AWG CU. WIRE IN 1/2" CONDUIT FROM CONTROL PANEL TO EACH MOTOR. EACH MOTOR SHALL HAVE A DEDICATED HOMERUN TO CONTROL PANEL. E.C. SHALL COORDINATE ALL LOCATIONS OF JUNCTION BOXES IN FIELD WITH BLIND LOCATIONS AND ARCHITECTURAL DRAWINGS. E.C. SHALL FURNISH AND INSTALL CAT-5E CABLING FROM CONTROL PANEL TO EACH MOTOR FOR CONTROL OF MOTORS. E.C. SHALL FURNISH ALL CAT-5E CABLE FOR LOW-VOLTAGE CONNECTIONS OF BLIND CONTROL PANELS AND LOW VOLTAGE LOCAL ROOM BLIND CONTROLS. THE FOURTH CONTROL PANEL SHALL BE WIRED TO POWER BLINDS AND LOCAL CONTROLS IN BATTALION OFFICE AND FITNESS ROOM. MOTORIZED BLIND CONTROL PANEL SHALL BE ITEM #1811416 (IGC4N1) AS MANUFACTURED BY HUNTERDOUGLAS ARCHITECTURAL. E.C. SHALL REFER TO DRAWING E6.02 FOR MOTORIZED BLIND CONTROL PANEL CONNECTION DIAGRAM FOR MORE INFORMATION.
5. E.C. SHALL COORDINATE ALL INSTALLATIONS OF CONTROLS AND MOTORIZED BLINDS IN FIELD. E.C. SHALL COORDINATE ALL CONDUIT RUNS IN FIELD. E.C. SHALL COORDINATE CONTROL PANELS FEEDING MOTORS IN FIELD, CONTROL PANELS CAN FEED A MAXIMUM OF 4 MOTORS EACH. E.C. SHALL INSTALL ALL EQUIPMENT PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
6. E.C. SHALL FURNISH AND INSTALL POP-UP RECEPTACLE AND USB BOXES INTO TABLE. E.C. SHALL INSTALL BOXES IN TABLE AFTER TABLES HAVE BEEN CUT BY CARPENTER FOR INSTALLATION. E.C. SHALL FOLLOW ALL MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. E.C. SHALL FURNISH AND INSTALL DEQUORUM FLIP-UP TABLE BOX MODEL #DQFP20UBK-U AS MANUFACTURED BY WIREMOLD LEGRANDE.
7. E.C. SHALL FURNISH AND INSTALL GROUND BAR ON WALL ADJACENT TO TELE DATA DEMARCATION BACKBOARD AND SHALL PROVIDE BARE #4 CU. WIRE GROUNDED TO BUILDING STEEL. ALL TELE/DATA CONDUITS, DATA RACKS AND TELE/DATA EQUIPMENT SHALL BE GROUNDED TO TELE/DATA GROUND BAR. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH TELE/DATA CONTRACTOR.
8. E.C. SHALL FURNISH AND INSTALL WIRELESS ACCESS POINT ON APPARATUS BAY CEILING. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH OTHER TRADE'S WORK IN THE AREA.
9. E.C. SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ELECTRICAL RACEWAY INSTALLATION DETAIL LOCATED AT THIS COLUMN.
10. E.C. SHALL MOUNT ALL CEILING MOUNTED SPEAKERS ABOVE ARMSTRONG WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH CEILING INSTALLATION CONTRACTOR AND ARCHITECTURAL DRAWINGS.
11. E.C. SHALL MOUNT ALL CEILING MOUNTED SPEAKERS ABOVE ARMSTRONG WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH CEILING INSTALLATION CONTRACTOR AND ARCHITECTURAL DRAWINGS.
12. E.C. SHALL COORDINATE EXACT HEIGHT OF JUNCTION BOXES WITH ARCHITECTURAL DRAWINGS. E.C. SHALL FURNISH AND INSTALL JUNCTION BOXES FLUSH WITH FACE OF WALL IN LOCATIONS AS COORDINATED WITH SIGNAGE VENDOR. E.C. SHALL RUN ALL CONDUIT INSIDE OF BLOCK WALLS TO MAKE CONNECTIONS TO BUILDING SIGNAGE.

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK PE084123 ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

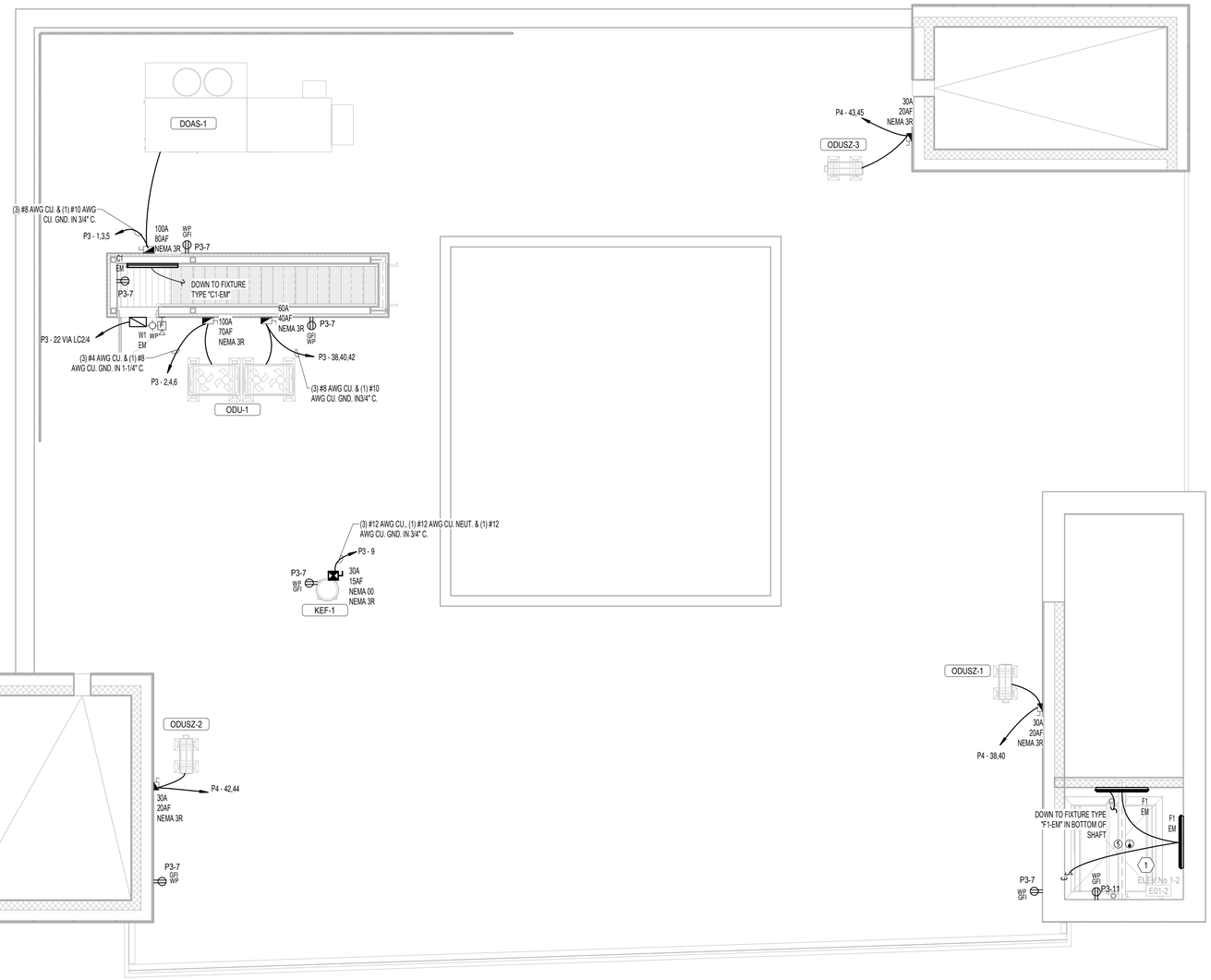
MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021

DRAWING TITLE: SECOND FLOOR POWER PLANS
SHEET NUMBER: E3.02

7/2/2021 4:51:01 PM



1 ROOF POWER PLAN

3/16" = 1'-0"

0 4' 8' 12'

GENERAL POWER NOTES

1. E.C. SHALL COORDINATE ALL DEVICE LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWING AND OWNER'S ONSITE REPRESENTATIVE BEFORE WORK COMMENCES.
2. ALL ITEMS SHOWN DARK AND SOLID REPRESENTS NEW WORK TO BE FURNISHED AND FULLY INSTALLED BY ELECTRICAL CONTRACTOR. ALL ITEMS SHOWN LIGHT AND SOLID REPRESENT EQUIPMENT AND WORK TO BE PERFORMED BY ANOTHER TRADE.
3. ALL RECEPTACLES MOUNTED TO EXTERIOR OF BUILDING SHALL BE INSTALLED SURFACE MOUNTED IN WEATHERPROOF BOX W/ IN USE WEATHERPROOF COVER, CONDUIT AND BRANCH CIRCUIT SHALL BE RUN CONCEALED IN BLOCK WALL. E.C. SHALL PROVIDE A BEAD OF CAULK AROUND THE PERIMETER OF THE BOX WHERE IT MEETS WALL. E.C. SHALL COORDINATE EXACT COLOR OF CAULK WITH ARCHITECT IN FIELD.
4. ALL LOW-VOLTAGE TELE/DATA WIRING, LOW-VOLTAGE WIRING DEVICES, COVERPLATES, HEAD-END EQUIPMENT, DATA RACKS AND OTHER EQUIPMENT ASSOCIATED WITH SECURITY AND TELE/DATA SYSTEMS INSTALLATIONS SHALL BE FURNISHED AND INSTALLED BY OWNER'S IT/SECURITY VENDOR/CONTRACTORS. E.C. SHALL BE RESPONSIBLE FOR INSTALLING J-HOOKS ABOVE CEILING AND CONDUIT STUB-UPS TO ABOVE CEILING FROM WALL MOUNTED LOW-VOLTAGE BOXES. E.C. SHALL FURNISH AND INSTALL CONDUITS WITH PULLSTRINGS.
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7. ALL RECEPTACLES SHOWN AS GFCI THAT CANNOT BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION FOR RESET FUNCTIONALITY SHALL BE FURNISHED AS A STANDARD RECEPTACLE FED FROM A GFCI TYPE BREAKER.
8. E.C. SHALL REFER TO DRAWING E0.00 FOR LEGEND INFORMATION.
9. E.C. SHALL UTILIZE ROOF CURBS INSTALLED WITH MECHANICAL EQUIPMENT TO RUN ALL ELECTRICAL WIRING TO MECHANICAL EQUIPMENT ON ROOF. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH MECHANICAL CONTRACTOR.
10. ALL PANELBOARDS AND WIRING DEVICES SHOWN ON BLOCK WALLS SHALL BE FURNISHED AND INSTALLED RECESSED FLUSH WITH BLOCK WALL. ALL CONDUITS AND WIRING FEEDING DEVICES SHALL BE INSTALLED IN HOLLOW OF BLOCK WALL. E.C. SHALL COORDINATE ALL WORK WITH MASONS BEFORE CONSTRUCTION COMMENCES.
11. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL DISCONNECTS SHOWN DARK AND SOLID ON MECHANICAL EQUIPMENT. ALL MECHANICAL EQUIPMENT SHOWN ON PLANS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL PRIME. E.C. SHALL FURNISH AND INSTALL ALL BRANCH CIRCUITS, CONDUITS, DISCONNECTS AND TERMINATIONS ON EQUIPMENT. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO STARTING PROJECT.
12. FOR ALL LOCATIONS SHOWN WHERE A RECEPTACLE AND DATA OUTLET ARE MOUNTED HIGH FOR A MONITOR OR TV E.C. SHALL FURNISH AND INSTALL A RECESSED TELEVISION BOX MODEL #TV2MW AS MANUFACTURED BY WIREMOLD LEGRANDE
13. ALL DEVICES SHOWN CEILING MOUNTED IN KITCHEN/DAYROOM, STUDY AND LOBBY WITH WOOD SLAT CEILINGS SHALL BE INSTALLED ABOVE WOOD SLAT CEILING. E.C. SHALL COORDINATE ALL WORK IN FIELD WITH ARCHITECTURAL DRAWINGS.
14. E.C. SHALL ENSURE ALL LOW-VOLTAGE, DATA, AND COAX CABLE THAT CROSSES ANY EXPOSED CEILING SHALL BE INSTALLED IN EMT.

KEYNOTES

1. ALL EQUIPMENT SHOWN IN ELEVATOR SHAFT ON THIS PLAN SHALL REPRESENT WORK IN THE TOP OF THE ELEVATOR SHAFT. E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH ELEVATOR INSTALLATION CONTRACTOR AND ARCHITECTURAL DRAWINGS.

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SEAL:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
SCOTT A. FRENCK
ENGINEER
PE084123

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EXP DATE: 9-30-21

CONSULTANT:

DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

DATE ISSUED: 09/13/2021

DRAWING TITLE: ROOF POWER PLANS

SHEET NUMBER: E3.03

7/2/2021 4:51:09 PM

Panel: P1

Location: TIER I DECON 114 | Supply From: MDP | Mounting: Flush | Enclosure: Indoor
Volts: 208Y/120 | Phases: 3 | Wires: 4
A.I.C. Rating: 10kA | Mains Type: MLO | Mains Rating: 225.0 A | MCB Rating: 225.0 A

Notes:

Circuit Description	Trip	Circuit Number	Number of Poles	Number of Poles	Circuit Number	Trip	Circuit Description
LTG - EXTERIOR, FLAG POLE	20 A	1	1	1	2	20 A	LTG - STAIR No 1-1 S01-1
LTG - STAIR 3-1	20 A	3	1	1	4	20 A	LTG - STAIR 2-1
LTG - 110,111, 113, 115, 109, 116, 112, 104, 105, 106	20 A	5	1	1	6	20 A	LTG - APPARATUS BAY 103
LTG - RGBW APPARATUS BAY 103	20 A	7	1	1	8	20 A	LTG - 219.1, 200.1, 200.3, 200.2
REC - RAM AIR GEAR DRYER	15 A	9	1	1	10	20 A	LTG - APPARATUS BAY 103
LTG - CREW OFFICE 102, LOBBY	20 A	11	1	1	12	30 A	REC - CORD REEL ***
REC - WASHER MACHINE	20 A	13	1	1	14	20 A	FIRE ALARM CONTROL PANEL **
REC - CREW OFFICE 102 COPIER	20 A	15	1	1	16	20 A	REC - WIREMOLD PLUGSTRIP RM 113
REC - ROOMS 109, 108, 115, 116, 101	20 A	17	1	2	18	30 A	DRYER (EQ-7)(5KW)
REC - ROOM 115	20 A	19	1		20		
REC - EXTERIOR CONVENIENCE	20 A	21	1	1	22	20 A	REC - APPARATUS BAY, FIRE STORAGE, SCBA,...
REC - REFRIGERATOR	20 A	23	1	1	24	20 A	REC - WIREMOLD PLUGSTRIP
REC - WIREMOLD PLUGSTRIP	20 A	25	1	1	26	20 A	REC - WIREMOLD PLUGSTRIP
REC - WIREMOLD PLUGSTRIP	20 A	27	1	1	28	20 A	REC - WIREMOLD PLUGSTRIP
REC - APPARATUS BAY 103	20 A	29	1	1	30	20 A	REC - ROOMS 103, 114, 112, 113
REC - WIREMOLD PLUGSTRIP RM 113	20 A	31	1	1	32	20 A	REC - WIREMOLD PLUGSTRIP RM 113
REC - WIREMOLD PLUGSTRIP RM 113	20 A	33	1	1	34	20 A	REC - WIREMOLD PLUGSTRIP RM 113
REC - WIREMOLD PLUGSTRIP RM 113	20 A	35	1	1	36	20 A	REC - WIREMOLD PLUGSTRIP RM 113
LTG - RELOCATED FIXTURES	20 A	37	1	1	38	15 A	EXHAUST FAN 4 (EF-4), LV-EF4
DISTECH CONTROLLER	15 A	39	1	1	40	15 A	EXTRACTION MACHINE
GENERATOR TERMINAL STRIP	30 A	41	2	1	42	20 A	SPARE
		43		1	44	20 A	SPARE
SPARE	20 A	45	1	1	46	20 A	SPARE
SPARE	20 A	47	1	1	48	20 A	SPARE
SPARE	20 A	49	1	1	50	20 A	SPARE
SPARE	20 A	51	1	1	52	20 A	SPARE
SPARE	20 A	53	1	1	54	20 A	SPARE

Notes:
** = FURNISH AND INSTALL CIRCUIT BREAKER WITH "LOCKABLE IN THE ON POSITION" HANDLE ATTACHMENT.
*** = FURNISH GFCI TYPE CIRCUIT BREAKER IN THIS POSITION.

Panel: P2

Location: MECHANICAL/ TRAINING... | Supply From: MDP | Mounting: Flush | Enclosure: Indoor
Volts: 208Y/120 | Phases: 3 | Wires: 4
A.I.C. Rating: 10kA | Mains Type: MLO | Mains Rating: 225.0 A | MCB Rating: 225.0 A

Notes:

Circuit Description	Trip	Circuit Number	Number of Poles	Number of Poles	Circuit Number	Trip	Circuit Description
REC - CREW OFFICE 102	20 A	1	1	1	2	20 A	REC - CREW OFFICE 102
REC - CREW OFFICE 102	20 A	3	1	1	4	30 A	REC - CORD REEL ***
*** REC - CORD REEL	30 A	5	1	1	6	30 A	REC - CORD REEL ***
*** REC - CORD REEL	30 A	7	1	1	8	30 A	REC - CORD REEL ***
OVERHEAD DOOR MOTOR (1HP)	20 A	9	3	1	10	20 A	REC - ROOMS 200.3, 200.2, 103 CAD MONITORS
		11		1	12	20 A	REC - STORAGE 200.3 DEMARC
		13		1	14	20 A	REC - MECHANICAL/ TRAINING MEZZANINE 200.1
REC - MECHANICAL/ TRAINING MEZZANINE 200.1	20 A	15	1	1	16	20 A	REC - APPARATUS BAY 103 CAD MONITOR
RADIANT HEAT PUMP (RP-1)	15 A	17	1	1	18	15 A	PUMP 1A/1B (P-1A,P-1B)
PUMP 2 (P-2)	15 A	19	1	1	20	15 A	PUMP 3 (P-3)
RADIANT HEAT PUMP 2 (RP-2)	15 A	21	1	1	22	15 A	TEK CONTROL PANELS
RADIANT HEAT PUMP 3 (RP-3)	15 A	23	1	1	24	15 A	RADIANT HEAT PUMP 4 (RP-4)
RADIANT HEAT PUMP 5 (RP-5)	15 A	25	1	1	26	20 A	REC - APPARATUS BAY 103 CAD MONITOR
REC - IPLAYER MEZZANINE	15 A	27	1	1	28	20 A	~~MOTORIZED BLIND CONTROL PANEL~~
REC - IPLAYER RGBW CONTROLLER	20 A	29	1	1	30	20 A	CEILING FAN 1 (CF-1)
SPARE	20 A	31	1	1	32	20 A	SPARE
SPARE	20 A	33	1	1	34	20 A	SPARE
SPARE	20 A	35	1	1	36	20 A	SPARE
SPARE	20 A	37	1	1	38	20 A	SPARE
SPARE	20 A	39	1	1	40	20 A	SPARE
SPARE	20 A	41	1	1	42	20 A	SPARE
SPARE	20 A	43	1	1	44	20 A	SPARE
SPARE	20 A	45	1	1	46	20 A	SPARE
SPARE	20 A	47	1	1	48	20 A	SPARE
SPARE	20 A	49	1	1	50	20 A	SPARE
SPARE	20 A	51	1	1	52	20 A	SPARE
SPARE	20 A	53	1	1	54	20 A	SPARE

Notes:
*** = FURNISH GFCI TYPE CIRCUIT BREAKER IN THIS POSITION.

Panel: P3

Location: ELEC 229 | Supply From: MDP | Mounting: Flush | Enclosure: Indoor
Volts: 208Y/120 | Phases: 3 | Wires: 4
A.I.C. Rating: 10kA | Mains Type: MLO | Mains Rating: 225.0 A | MCB Rating: 225.0 A

Notes:

Circuit Description	Trip	Circuit Number	Number of Poles	Number of Poles	Circuit Number	Trip	Circuit Description
DOAS-1	80 A	1	3	3	2	70 A	ODU-1A
		3			4		
		5			6		
REC - ROOF CONVENIENCE	20 A	7	1	1	8	20 A	LTG - CORRIDORS 211, 207 *
KITCHEN EXHAUST FAN 1 (KEF-1)	15 A	9	1	1	10	20 A	LTG - CORRIDOR 211, 207 *
REC & LTG - ELEVATOR SHAFT	20 A	11	1	1	12	20 A	LTG & REC - T&S 209 *
* LTG & REC - T&S 208	20 A	13	1	1	14	20 A	LTG & REC - T&S 206 *
* LTG & REC - T&S 223	20 A	15	1	1	16	20 A	LTG - OFFICE, CONFERENCE RM, BUNKS, POLES
LTG - CORRIDOR 201, KITCHEN 204, STUDY 202,...	20 A	17	1	1	18	20 A	LTG - ROOMS RGBW 204, 202, 201
KITCHEN EXHAUST HOOD	20 A	19	1	1	20	20 A	REC - OVEN
GARBAGE DISPOSAL (3/4HP)	20 A	21	1	1	22	20 A	LTG - COURTYARD, ROOF
VRFI ROOMS 224, 201, 202, 212, 214, 215, 216, 217, 226, 211, 230, 219.2	15 A	23	2	1	24	20 A	LTG - BUILDING SIGNAGE
		25		1	26	20 A	REC - STUDY 202
DISHWASHER	20 A	27	1	1	28	20 A	REC -IT 227
REC - IT 227	20 A	29	1	1	30	30 A	REC - DATA RACK IT 227
REC - WASHER MACHINE	20 A	31	1	1	32	20 A	REC - BATTALION OFFICE 224
REC - BATTALION OFFICE 224	20 A	33	1	1	34	20 A	REC - TOILET 228 *
REC - CONFERENCE ROOM 226	20 A	35	1	1	36	20 A	REC - CONFERENCE ROOM 226
LTG - ELEVATOR CAB	15 A	37	1	3	38	40 A	ODU-1B
REC - FLOORBOX DAYROOM 203	20 A	39	1		40		
REC - FLOORBOX DAYROOM 203	20 A	41	1		42		
LTG - KITCHEN/DINING 204, JAN 205	20 A	43	1	1	44	20 A	SPARE
SPARE	20 A	45	1	1	46	20 A	SPARE
SPARE	20 A	47	1	1	48	20 A	SPARE
SPARE	20 A	49	1	1	50	20 A	SPARE
SPARE	20 A	51	1	1	52	20 A	SPARE
SPARE	20 A	53	1	1	54	20 A	SPARE

Notes:
* = FURNISH AND INSTALL ARC FAULT CIRCUIT INTERRUPTER (AFCI) TYPE CIRCUIT BREAKER IN THIS POSITION.

Panel: P4

Location: ELEC 229 | Supply From: MDP | Mounting: Flush | Enclosure: Indoor
Volts: 208Y/120 | Phases: 3 | Wires: 4
A.I.C. Rating: 10kA | Mains Type: MLO | Mains Rating: 225.0 A | MCB Rating: 225.0 A

Notes:

Circuit Description	Trip	Circuit Number	Number of Poles	Number of Poles	Circuit Number	Trip	Circuit Description
MOTORIZED BLIND CONTROL PANEL	20 A	1	1	1	2	20 A	MOTORIZED BLIND CONTROL PANEL
MOTORIZED BLIND CONTROL PANEL	20 A	3	1	1	4	20 A	REC - BUNK 212 *
* REC - BUNK 213	20 A	5	1	1	6	20 A	REC - BUNK 214 *
* REC - BUNK 215	20 A	7	1	1	8	20 A	REC - BUNK 216 *
* REC - BUNK 217	20 A	9	1	1	10	20 A	REC - BUNK 222 *
* REC - CORRIDORS 207,211,225, CAD MONITOR	20 A	11	1	1	12	20 A	REC - CAD MONITOR CORR. 211, STAIR S-3
REC - LAUNDRY ROOM	20 A	13	1	1	14	20 A	REC - COURTYARD 218
REC - COURTYARD 218	20 A	15	1	1	16	20 A	FIRE RATED POKE THRU FITNESS 230
FIRE RATED POKE THRU FITNESS 230	20 A	17	1	1	18	20 A	FIRE RATED POKE THRU FITNESS 230
FIRE RATED POKE THRU FITNESS 230	20 A	19	1	1	20	20 A	FIRE RATED POKE THRU FITNESS 230
FIRE RATED POKE THRU FITNESS 230	20 A	21	1	1	22	20 A	REC - CAD MONITORS FITNESS 230
REC - FITNESS 230	20 A	23	1	1	24	20 A	REC - FITNESS 230
REC - JAN 205, KITCHEN/DINING 204	20 A	25	1	1	26	20 A	REC - CAD MONITORS STAIR S02-2, DINING 204
REC - KITCHEN/DINING 204 COUNTER	20 A	27	1	1	28	20 A	REC - REFRIGERATOR
REC - REFRIGERATOR	20 A	29	1	1	30	20 A	REC - KITCHEN/DINING 204 COUNTER
REC - KITCHEN/DINING 204 COUNTER	20 A	31	1	1	32	20 A	REC - KITCHEN/DINING 204 COUNTER
REC - KITCHEN/DINING 204 COUNTER	20 A	33	1	1	34	20 A	REC - KITCHEN/DINING 204
REC - MICROWAVE KITCHEN/DINING 204	20 A	35	1	1	36	20 A	REC - KITCHEN/DINING 204
REC - DAYROOM 203	20 A	37	1	2	38	20 A	ODUSZ-1
REC - STUDY 202	20 A	39	1		40		
REC - KITCHEN GREASE INTERCEPTER (GI-1)	15 A	41	1	2	42	20 A	ODUSZ-2
ODUSZ-3	20 A	43	2		44		
		45		1	46	20 A	MOTORIZED BLIND CONTROL PANEL
SPARE	20 A	47	1	1	48	20 A	SPARE
SPARE	20 A	49	1	1	50	20 A	SPARE
SPARE	20 A	51	1	1	52	20 A	SPARE
SPARE	20 A	53	1	1	54	20 A	SPARE

Notes:
* = FURNISH AND INSTALL ARC FAULT CIRCUIT INTERRUPTER (AFCI) TYPE CIRCUIT BREAKER IN THIS POSITION.

Panel: MP1

Location: MECHANICAL/ TRAINING... | Supply From: MDP | Mounting: Flush | Enclosure: Indoor
Volts: 208Y/120 | Phases: 3 | Wires: 4
A.I.C. Rating: 10kA | Mains Type: MLO | Mains Rating: 225.0 A | MCB Rating: 225.0 A

Notes:

Circuit Description	Trip	Circuit Number	Number of Poles	Number of Poles	Circuit Number	Trip	Circuit Description
ARCTIC COMPRESSOR E4-10-A6 (EQ5)	30 A	1	3	1	2	15 A	BOILER 1A (B-1A)
		3		1	4	15 A	WATER HEATER RECIRC PUMP 1 (WHP-1)
		5		2	6	15 A	HR-4, VRFI-101, VRFI-102
EXHAUST FAN 1 (EF-1) (2HP)	25 A	7	2		8		
		9		1	10	15 A	BOILER 1B (B-1B)
PLYMOVEMENT CONTROL PANEL	15 A	11	1	1	12	20 A	REC - RADIANT MIXING VALVE CONTROLLER
EXHAUST FAN 2 (EF-2)	15 A	13	1	1	14	20 A	SPARE
EXHAUST FAN 3 (EF-3) (7.5HP)	50 A	15	3	2	16	20 A	ROLL-UP DOOR MOTOR
		17			18		
		19		2	20	20 A	ROLL-UP DOOR MOTOR
ROLL-UP DOOR MOTOR	20 A	21	2		22		
		23		2	24	20 A	ROLL-UP DOOR MOTOR
FOUR-FOLD DOOR MOTOR	20 A	25	3		26		
		27		3	28	20 A	FOUR-FOLD DOOR MOTOR
		29			30		
FOUR-FOLD DOOR MOTOR	20 A	31	3		32		
		33		2	34	20 A	ELECTRIC UNIT HEATER 1 (EUH-1) (2.5KW)
		35			36		
DRYER (5KW)	30 A	37	2	3	38	15 A	1 TON GANTRY CRANE (1.2HP)
		39			40		
REC - GLYCOL FEEDER GMP6	20 A	41	1		42		
SPARE	20 A	43	1	1	44	20 A	SPARE
SPARE	20 A	45	1	1	46	20 A	SPARE
SPARE	20 A	47	1	1	48	20 A	SPARE
SPARE	20 A	49	1	1	50	20 A	SPARE
SPARE	20 A	51	1	1	52	20 A	SPARE
SPARE	20 A	53	1	1	54	20 A	SPARE

Notes:

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC LLC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07/29/21
2	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ELECTRICAL PANEL SCHEDULES
SHEET NUMBER: E6.00

8/24/2021 5:50:03 PM

LIGHTING FIXTURE SCHEDULE

Identify Type Mark	WATTS	VOLTS	LAMP TYPE	KELVIN TEMP	MANUFACTURER/MODEL	DESCRIPTION	REMARKS
A1	45W	120V	LED	2700 K	LEDALITE / 3901L92740QS104DE1NNNW	4' LINEAR LAY-IN LUMINAIRE, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER, 3" WIDE FLUSH MESO OPTICS LENS	
A1 EM	45W	120V	LED	2700 K	LEDALITE / 3901L92740QS104DE1BNNW	4' LINEAR LAY-IN LUMINAIRE, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER, 3" WIDE FLUSH MESO OPTICS LENS, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
A2	68W	120V	LED	2700 K	LEDALITE / 3901L92740QS106DE1NNNW	6' LINEAR LAY-IN LUMINAIRE, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER, 3" WIDE FLUSH MESO OPTICS LENS	
A2 EM	68W	120V	LED	2700 K	LEDALITE / 3901L92740QS106DE1BNNW	6' LINEAR LAY-IN LUMINAIRE, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER, 3" WIDE FLUSH MESO OPTICS LENS, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
A3	33W	120V	LED	3500 K	LEDALITE / 1201LBEQS127DEC,A1-24	4' LINEAR SUSPENDED FIXTURE, SPLASH PERFECT HOUSING, DIE-CAST ALUMINUM END-CAPS, POWDER COAT CUSTOM COLOR FINISH (AS SELECTED BY ARCHITECT), 0-10V ELECTRONIC DIMMING DRIVER, 20 GUAGE COLD-ROLLED STEEL HOUSING, NON-ACCESSIBLE CEILING MOUNT	FIXTURES A3 AND A3-EM SHALL BE FURNISHED AND INSTALLED IN A CONTINOUS ROW AS SHOWN ON PLANS. E.C. SHALL COORDINATE CONFIGURATION WITH FIXTURE VENDOR PRIOR TO PURCHASING FIXTURES.
A3 EM	33W	120V	LED	3500 K	LEDALITE / 1201LBEQS12NDEC,A1-24	4' LINEAR SUSPENDED FIXTURE, SPLASH PERFECT HOUSING, DIE-CAST ALUMINUM END-CAPS, POWDER COAT CUSTOM COLOR FINISH (AS SELECTED BY ARCHITECT), 0-10V ELECTRONIC DIMMING DRIVER, 20 GUAGE COLD-ROLLED STEEL HOUSING, 10W 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION, NON-ACCESSIBLE CEILING MOUNT	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY. FIXTURES A3 AND A3-EM SHALL BE FURNISHED AND INSTALLED IN A CONTINOUS ROW AS SHOWN ON PLANS. E.C. SHALL COORDINATE CONFIGURATION WITH FIXTURE VENDOR PRIOR TO PURCHASING FIXTURES.
B1	34W	120V	LED	3500 K	DAY-BRITE / 2FPZ38L835-2-DS-UNV-DIM	2'x2' FLAT PANEL FIXTURE, WHITE HOUSING, WHITE ACRYLIC LENS, WHITE FINISH, ELECTRONIC DRIVER, 0-10V ELECTRONIC DIMMING DRIVER	
C1 EM	34W	120V	LED	3500 K	DAY-BRITE / SF4_C42A35UDZT-OC-EMLED	4' LINEAR SURFACE MOUNT STAIRWELL FIXTURE, INTEGRATED MOTION SENSOR, 0-10V BI-LEVEL DRIVER, WHITE FINISH, COLD-ROLLED STEEL HOUSING AND END CAPS, WHITE OPAQUE ACRYLIC LENS	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
D1	15W	120V	LED	3500 K	OXYGEN / ADELPHI 3-537-24	24" WIDE VANITY FIXTURE, MATTE WHITE ACRYLIC LENS, 0-10V ELECTRONIC DIMMING DRIVER, PLATED STEEL HOUSING, SATIN NICKEL FINISH	FIXTURE SHALL BE MOUNTED CENTERED, OVERTOP OF MIRROR. COORDINATE EXACT HEIGHT IN FIELD.
EX1	3.6W	120V/6V DC	RED LED		EVENLITE / SOV-EM-R-1C-WH-RC-UC (OR APPROVED EQUAL)	SINGLE FACE EDGE-LIT EXIT SIGN, RED LETTERS, CLEAR ACRYLIC PLAQUE, CEILING MOUNTED, 90 MINUTE MINIMUM EMERGENCY OPERATION, CHEVRON ARROWS (AS NECESSARY),WHITE FINISH	EXIT SIGNS SHALL BE INSTALLED CENTERED, OVERTOP OF EGRESS DOORS.
EX2	3.6W	120V/6V DC	RED LED		EVENLITE / SOV-EM-R-1C-WH-WM-UC (OR APPROVED EQUAL)	SINGLE FACE EDGE-LIT EXIT SIGN, CLEAR ACRYLIC PLAQUE, RED LETTERS, WALL MOUNTED, 90 MINUTE MINIMUM EMERGENCY OPERATION, CHEVRON ARROWS (AS NECESSARY), WHITE FINISH	EXIT SIGNS SHALL BE INSTALLED CENTERED, OVERTOP OF EGRESS DOORS.
EX3	2.5W	120V/6V DC	RED LED		EVENLITE / CCDS-EM-R-1-AB-1B-DL (OR APPROVED EQUAL)	SINGLE FACE EXIT SIGN, BRUSHED ALUMINUM FACE, BLACK HOUSING, RED LETTERS, WALL MOUNTED, 90 MINUTE MINIMUM EMERGENCY OPERATION, CHEVRON ARROWS (AS NECESSARY)	EXIT SIGNS SHALL BE INSTALLED CENTERED, OVERTOP OF EGRESS DOORS.
F1 EM	47W	120V	LED	3500 K	ILP / WTZ4-6L-U-50-SPCL-CT-SS-EM12	4' LINEAR FULLY ENCLOSED AND GASKETED FIXTURE, WHITE FINISH, ELECTRONIC DRIVER, SHALLOW POLYCARBONATE CLEAR LENS, WET LOCATION LISTED, -40ºF STARTING DRIVER	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
G1	53W	120V	LED	3500 K	BETA-CALCO / FTQP1P02-LMA0450-CR80-CTA35-V1-DA02-SS2-FA__-CF__-E0	22" SQUARE SUSPENDED FIXTURE, INDIRECT/DIRECT LIGHT DISTRIBUTION, 0-10V ELECTRONIC DIMMING DRIVER, ALUMINUM AND STEEL HOUSING, OPAL ACRYLIC LENS, REMOTE MOUNTED DRIVER	FIXTURE SHALL BE FURNISHED WITH CUSTOM COLOR AND FINISH AS SELECTED BY ARCHITECT PRIOR TO PURCHASING FIXTURE.
G2 EM	96W	120V	LED	3500 K	BETA-CALCO / FTQP1P03-LMA0450-CR80-CTA35-V1-DA02-SS2-FA__-CF__-E2	36" SQUARE SUSPENDED FIXTURE, INDIRECT/DIRECT LIGHT DISTRIBUTION, 0-10V ELECTRONIC DIMMING DRIVER, ALUMINUM AND STEEL HOUSING, OPAL ACRYLIC LENS, REMOTE MOUNTED DRIVER, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	FIXTURE SHALL BE FURNISHED WITH CUSTOM COLOR AND FINISH AS SELECTED BY ARCHITECT PRIOR TO PURCHASING FIXTURE. ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
G3	127W	120V	LED	3500 K	BETA-CALCO / FTQP1P04-LMA0450-CR80-CTA35-V1-DA02-SS2-FA__-CF__-E0	48" SQUARE SUSPENDED FIXTURE, INDIRECT/DIRECT LIGHT DISTRIBUTION, 0-10V ELECTRONIC DIMMING DRIVER, ALUMINUM AND STEEL HOUSING, OPAL ACRYLIC LENS, REMOTE MOUNTED DRIVER	FIXTURE SHALL BE FURNISHED WITH CUSTOM COLOR AND FINISH AS SELECTED BY ARCHITECT PRIOR TO PURCHASING FIXTURE
H1	36W	120V	LED	3500 K	DAY-BRITE / 2SML43L835-4-FA12F-UNV-DIM-CS-12	2'x4' STEM MOUNTED FIXTURE, FLAT ALUMINUM HOUSING, .125" PATTERN 12 ACRYLIC PRISMATIC LENS, 0-10V ELECTRONIC DIMMING DRIVER, WHITE FINISH, 12" STEM	
H1 EM	36W	120V	LED	3500 K	DAY-BRITE / 2SML43L835-4-FA12F-UNV-DIM-EMLED-CS-12	2'x4' STEM MOUNTED FIXTURE, FLAT ALUMINUM HOUSING, .125" PATTERN 12 ACRYLIC PRISMATIC LENS, 0-10V ELECTRONIC DIMMING DRIVER, 12" STEM, 90 MINUTE MINIMUM EMERGENCY BATTERY BACKUP OPERATION	
J1	76W	120V	LED	3500 K	FLUXWERX / VU1BBD90C08GE1M03_F_	8' LINEAR SUSPENDED FIXTURE, ANODIZED EXTRUDED ARCHITECTURAL GRADE ALUMINUM BODY, STAINLESS STEEL HARDWARE, MOLDED HIGH TRANSMITTANCE CLEAR ACRYLIC LENS, BLACK POWDERCOAT FINISH, REMOTE 0-10V ELECTRONIC DIMMING DRIVER, GRID MOUNT	FIXTURE SHALL BE MOUNTED AT 6'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. ALL HEIGHTS SHALL BE COORDINATED IN FIELD WITH ARCHITECTURAL DRAWINGS.
K1	22W	120V	LED	3500 K	CALCULITE / 6RN-C6L20935MZ10U-C6RDLCDP	6" LED LENSED DOWNLIGHT, ELECTRONIC 0-10V DIMMING DRIVER, COMFORT CLEAR DIFFUSE REFLECTOR FINISH, POLISHED FLANGE	FIXTURES LOCATED IN SHOWERS SHALL BE PROVIDED WITH "SL" NON-CONDUCTIVE TRIM WITH LENS.
K1 EM	22W	120V	LED	3500 K	CALCULITE / 6RNEM-C6L20935MZ10U-C6RDLCDP	6" LED LENSED DOWNLIGHT, ELECTRONIC 0-10V DIMMING DRIVER, COMFORT CLEAR DIFFUSE REFLECTOR FINISH, POLISHED FLANGE, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	FIXTURES LOCATED IN SHOWERS SHALL BE PROVIDED WITH "SL" NON-CONDUCTIVE TRIM WITH LENS. FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
L1	41W	120V	LED	2700 K	GAMMALUX / GB54RC2BX6-1HL279-UNIVZTV10-4'N-REC/ARMSTRONG WOOD GRILLE-ASLMD-CUSTOM COLOR10	4' LINEAR FIXTURE, ARMSTRONG WOOD GRILLE CEILING CUSTOM MOUNTING CLIPS, CUSTOM COLOR FINISH, 0-10V ELECTRONIC DIMMING DRIVER, SATIN MEDIUM DIFFUSE ACRYLIC LENS	E.C. SHALL PROVIDE CUSTOM MADE MOUNTING CLIPS FOR ARMSTRONG WOOD GRILLE CEILING TYPE AS SPECIFIED ON ARCHITECTURAL DRAWINGS. E.C. SHALL MOUNT FIXTURES SO THE FACE OF FIXTURE IS FLUSH WITH WOOD SLAT CEILING AFTER INSTALLATION.
L1 EM	41W	120V	LED	2700 K	GAMMALUX / GB54RC2BX6-1HL279-UNIVZTV10-4'N-REC/ARMSTRONG WOOD GRILLE-ASLMD-CUSTOM COLOR10-BPE	4' LINEAR FIXTURE, ARMSTRONG WOOD GRILLE CEILING CUSTOM MOUNTING CLIPS, CUSTOM COLOR FINISH, 0-10V ELECTRONIC DIMMING DRIVER, SATIN MEDIUM DIFFUSE ACRYLIC LENS, 90 MINUTE MINIMUM EMERGENCY BATTERY BACKUP OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY. E.C. SHALL PROVIDE CUSTOM MADE MOUNTING CLIPS FOR ARMSTRONG WOOD GRILLE CEILING TYPE AS SPECIFIED ON ARCHITECTURAL DRAWINGS. E.C. SHALL MOUNT FIXTURES SO THE FACE OF FIXTURE IS FLUSH WITH WOOD SLAT CEILING AFTER INSTALLATION.
L2	82W	120V	LED	2700 K	GAMMALUX / GB54RC2BX6-1HL279-UNIVZTV10-8'N-REC/ARMSTRONG WOOD GRILLE-ASLMD-CUSTOM COLOR10	8' LINEAR FIXTURE, ARMSTRONG WOOD GRILLE CEILING CUSTOM MOUNTING CLIPS, CUSTOM COLOR FINISH, 0-10V ELECTRONIC DIMMING DRIVER, SATIN MEDIUM DIFFUSE ACRYLIC LENS	E.C. SHALL PROVIDE CUSTOM MADE MOUNTING CLIPS FOR ARMSTRONG WOOD GRILLE CEILING TYPE AS SPECIFIED ON ARCHITECTURAL DRAWINGS. E.C. SHALL MOUNT FIXTURES SO THE FACE OF FIXTURE IS FLUSH WITH WOOD SLAT CEILING AFTER INSTALLATION.
L2 EM	82W	120V	LED	2700 K	GAMMALUX / GB54RC2BX6-1HL279-UNIVZTV10-8'N-REC/ARMSTRONG WOOD GRILLE-ASLMD-CUSTOM COLOR10-BPE	8' LINEAR FIXTURE, ARMSTRONG WOOD GRILLE CEILING CUSTOM MOUNTING CLIPS, CUSTOM COLOR FINISH, 0-10V ELECTRONIC DIMMING DRIVER, SATIN MEDIUM DIFFUSE ACRYLIC LENS, 90 MINUTE MINIMUM EMERGENCY BATTERY BACKUP OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY. E.C. SHALL PROVIDE CUSTOM MADE MOUNTING CLIPS FOR ARMSTRONG WOOD GRILLE CEILING TYPE AS SPECIFIED ON ARCHITECTURAL DRAWINGS. E.C. SHALL MOUNT FIXTURES SO THE FACE OF FIXTURE IS FLUSH WITH WOOD SLAT CEILING AFTER INSTALLATION.
M1	32W	120V	LED	3500 K	DAY-BRITE / FSX440L835-UNV-DIM-DACH48	4' LINEAR STRIP FIXTURE, FULLY SEALED, WET LOCATION LISTED, WHITE ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING DRIVER, COLD WEATHER RATED (-20ºC) OPERATING TEMPERATURE, ADJUSTABLE CABLE HANGER KIT	FIXTURES SHALL BE SUSPENDED FROM BUILDING STRUCTURE AT 8'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE.
M1 EM	32W	120V	LED	3500 K	DAY-BRITE / FSX440L835-UNV-DIM-BSL6LST-DACH48	4' LINEAR STRIP FIXTURE, FULLY SEALED, WET LOCATION LISTED, WHITE ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING DRIVER, COLD WEATHER RATED (-20ºC) OPERATING TEMPERATURE, ADJUSTABLE CABLE HANGER KIT	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY. FIXTURES SHALL BE SUSPENDED FROM BUILDING STRUCTURE AT 8'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE.
M2	64W	120V	LED	3500 K	DAY-BRITE / FSX880L835-UNV-DIM-DACH48	8' LINEAR STRIP FIXTURE, FULLY SEALED, WET LOCATION LISTED, WHITE ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING DRIVER, COLD WEATHER RATED (-20ºC) OPERATING TEMPERATURE, ADJUSTABLE CABLE HANGER KIT	FIXTURES SHALL BE SUSPENDED FROM BUILDING STRUCTURE AT 8'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE.
M3	32W	120V	LED	3500 K	DAY-BRITE / FSX440L835-UNV-DIM-MD360WD-DACH48	4' LINEAR STRIP FIXTURE, FULLY SEALED, WET LOCATION LISTED, WHITE ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING DRIVER, COLD WEATHER RATED (-20ºC) OPERATING TEMPERATURE, SURFACE MOUNTED, END CAP MOUNTED ON/DIM INFRARED MOTION DETECTOR	FIXTURES SHALL BE SUSPENDED FROM BUILDING STRUCTURE AT 8'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE.
M3 EM	32W	120V	LED	3500 K	DAY-BRITE / FSX440L835-UNV-DIM-BSL6LST-MD360WD-DACH48	4' LINEAR STRIP FIXTURE, FULLY SEALED, WET LOCATION LISTED, WHITE ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING DRIVER, COLD WEATHER RATED (-20ºC) OPERATING TEMPERATURE, SURFACE MOUNTED, END CAP MOUNTED ON/DIM INFRARED MOTION DETECTOR, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY. FIXTURES SHALL BE SUSPENDED FROM BUILDING STRUCTURE AT 8'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE.
N1	142W	120V	LED	3500 K	DAY-BRITE / FBX20LL35-UNV-W-LCA-FBX CHAIN KIT	24" SQUARE HIGH-BAY FIXTURE, 0-10V ELECTRONIC DIMMING DRIVER, WHITE FINISH, ACRYLIC LENS, CHAIN MOUNTED,	
N1 EM	142W	120V	LED	3500 K	DAY-BRITE / FBX20LL35-UNV-W-LCA-EMLED-FBX CHAIN KIT	24" SQUARE HIGH-BAY FIXTURE, 0-10V ELECTRONIC DIMMING DRIVER, WHITE FINISH, ACRYLIC LENS, CHAIN MOUNTED, 90 MINUTE MINIMUM EMERGENCY BATTERY OPERATION	ALL FIXTURES LABELED "EM" SHALL BE PROVIDED WITH AN EMERGENCY BACKUP BATTERY.
P1	30W	120V	LED	2700 K	COLOR KINETICS / 523-000098-10_120-000189-27_120-000201-03 (OR APPOVED EQUAL)	STANCHION MOUNTED FLOOD LIGHT, 20º SPREAD DISTRIBUTION, BLACK FINISH, BLACK HALF SHIELD, ELECTRONIC DRIVER, WET LOCATION LISTED, IPP66 RATED,	E.C. SHALL AIM FLOODLIGHTS UPWARD AT FLAG. E.C. SHALL INSTALL FIXTURE SO AS TO PREVENT LIGHT SPILLAGE ABOVE FLAG. FLOODLIGHT SHALL BE MOUNTED ON A STANCHION BASE INSTALLED IN PLANTER. E.C. SHALL COORDINATE ALL MOUNTING IN FIELD TO BE SECURE AS NOT TO FALL OVER BY ITS OWN WIEGHT.
Q1	41W	120V	LED	3500 K	DAY-BRITE / 2AVEG38L835-2-ACR-UNV-DIM	2'x2' LAY-IN ARCHITECTURAL BASKET FIXTURE, 0-10V ELECTRONIC DIMMING DRIVER, WHITE FINISH, WHITE RIBBED ACRYLIC DIFFUSER	
S1	7.7W	120V	LED	2700 K	BEGA / 22 249+K27-BLK (OR APPROVED EQUAL)	STEPLIGHT FIXTURE, CAST ALUMINUM, CLEAR SAFETY GLASS, IP65 RATED, BLACK FINISH, 0-10V DIMMING ELECTRONIC DRIVER	FIXTURE SHALL BE MOUNTED AT 30" ABOVE FINISHED FLOOR AS MEASURED TO BOTTOM OF FIXTURE.
T1	4.4W/FT	120V	LED	2700 K	TARGETTI / DL-ED-44-I-27-HC024-A-DL-ALUM-U-8-DELI901241CPWM	36 LED/FT TAPELIGHT, FACTORY PREPPED ENDS, REMOTE POWER SUPPLY, ALUMINUM MOUNTING CHANNEL, FIELD CUTTABLE	E.C. SHALL TAKE-OFF ALL LENGTHS OF TAPELIGHT FROM DRAWINGS AND SHALL CONFIRM LENGTHS IN FIELD WITH ACTUAL LIGHT FIXTURE LOCATION DIMENSIONS. E.C. TO PROVIDE ADEQUATE NUMBER OF DRIVERS FOR TAPELIGHT OPERATION. E.C. SHALL MOUNT TAPELIGHT ON TOE KICK OF LOCKERS
U1	11.8W	120V	LED	4000 K	JUNIPER-DESIGN / JUNIPER 36IN-8-7-4000K-8LACK-0-10V	(2) 3' LINEAR ARM MOUNTED FIXTURES EACH FIXTURE, 7" STANDOFF MOUNTING ARMS, SATIN BLACK FINISH, ELECTRONIC 0-10V DIMMING DRIVER, STANDARD REMOTE DRIVER, 90 CRI, ALUMINUM BODY, FROSTED LENS	FIXTURES SHALL BE MOUNTED AS COORDINATED WITH ARCHITECTURAL DRAWINGS.
V1	32W	120V	RGBW LED	3000 K	DAY-O-LITE / PRFL-24-D-FL-930-RGBWW-HO-4-TRL-W-DIM10	4' LINEAR RECESSED RGBW FIXTURE, 5 CHANNEL TUNABLE WHITE FIXTURE, WARM WHITE, COOL WHITE, EXTRUDED ALUMINUM HOUSING, FLUSH OPAL ACRYLIC LENS, HIGH OUTPUT DRIVER, FLANGLESS TRIM, 0-10V ELECTRONIC DIMMING DRIVER	E.C. SHALL COORDINATE ALL LOCATIONS IN FIELD WITH ARCHITECTURAL DRAWINGS.
V2	36W	120V	RGBW LED	3000 K	DAY-O-LITE / PRFL-22-D-FL-930-RGBWW-SO-4-AC-W-DIM10	4' LINEAR CEILING SUSPENDED RGBW DIRECT FIXTURE, 5 CHANNEL TUNABLE WHITE FIXTURE, WARM WHITE, COOL WHITE, EXTRUDED ALUMINUM HOUSING, FLUSH OPAL ACRYLIC LENS, HIGH OUTPUT DRIVER, FLANGLESS TRIM, WHITE FINISH, AIRCRAFT CABLE HUNG, 0-10V ELECTRONIC DIMMING DRIVER	FIXTURES SHALL BE MOUNTED AT 16'6" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE LOCATIONS OF FIXTURES IN FIELD WITH ARCHITECTURAL DRAWINGS.
V3	18W	120V	RGBW LED	3000 K	DAY-O-LITE / PRFL-22-D-FL-930-RGBWW-SO-2-AC-W-DIM10	2' LINEAR RECESSED RGBW FIXTURE, 5 CHANNEL TUNABLE WHITE FIXTURE, WARM WHITE, COOL WHITE, EXTRUDED ALUMINUM HOUSING, FLUSH OPAL ACRYLIC LENS, HIGH OUTPUT DRIVER, FLANGLESS TRIM, 0-10V ELECTRONIC DIMMING DRIVER	FIXTURES SHALL BE MOUNTED AT 16'6" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE LOCATIONS OF FIXTURES IN FIELD WITH ARCHITECTURAL DRAWINGS.
W1 EM	37W	120V	LED	4000 K	GARDCO / 101L-16L-650-NW-G1-3-EBPC-120-CS50-IMR12-_-BK (OR APPROVED EQUAL)	WALL MOUNTED FULL-CUTOFF FIXTURE, 16 LEDS, DIE CAST ALUMINUM HOUSING, BLACK FINISH, WET LOCATION LISTED, 0-10V ELECTRONIC DRIVER, 90 MINUTE MINIMUM INTEGRAL EMERGENCY BATTERY BACKUP, STAINLESS STEEL HARDWARE, TEMPERED GLASS LENS, COLD WEATHER DRIVER AND BATTERY, MOTION SENSOR, ALL NIGHT 50% DIMMING	FIXTURES SHALL BE MOUNTED AT 8'-0" A.F.G. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS IN FIELD WITH ARCHITECTURAL DRAWINGS.
W2	107W	120V	LED	4000 K	GARDCO / 101L-32L-1000-NW-G1-3-_-UNV-CS50-IMR12-_-BK	WALL MOUNTED FULL-CUTOFF FIXTURE, 32 LEDS, DIE CAST ALUMINUM HOUSING, BLACK FINISH, WET LOCATION LISTED, 0-10V ELECTRONIC DRIVER, STAINLESS STEEL HARDWARE, TEMPERED GLASS LENS, COLD WEATHER DRIVER, MOTION SENSOR, ALL NIGHT 50% DIMMING	FIXTURE SHALL BE MOUNTED AT 14'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS IN FIELD WITH ARCHITECTURAL DRAWINGS.

FIRE ALARM SYSTEM

PROVIDE A NEW ANALOG/ADDRESSIBLE FIRE DETECTION AND EVACUATION SYSTEM INCLUDING ALL DEVICES, WIRING, CONDUIT, BOXES, AND CONTROLS AS SHOWN ON THE DRAWINGS AND AS REQUIRED TO INSURE A COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEM. ALL FIRE ALARM EQUIPMENT IS TO BE UL AND F.M. LISTED/APPROVED.

INITIATING, SIGNAL AND COMMUNICATION BUSS CIRCUITS: SHALL BE AEROSPACE WIRE & CABLE INC., AEROSPACE
- #7140 18/2 TW/SH 200 DEG.C. FPLP (NEW YORK CITY CERTIFIED)
- #7130 16/2 TW/SH 200 DEG.C. FPLP (NEW YORK CITY CERTIFIED)
- #7120 14/2 TW/SH 200 DEG.C. FPLP (NEW YORK CITY CERTIFIED)
- #7110 12/2 TW/SH 200 DEG.C. FPLP (NEW YORK CITY CERTIFIED)

ANY AND ALL FIRE ALARM CABLE USED IN THIS SYSTEM SHALL BE "SOLID COPPER" CONDUCTORS. NO EXCEPTIONS.

ALL FIRE ALARM CABLING SHALL BE INSTALLED IN RED ALLIED TUBE EMT OR EQUAL CONDUIT.

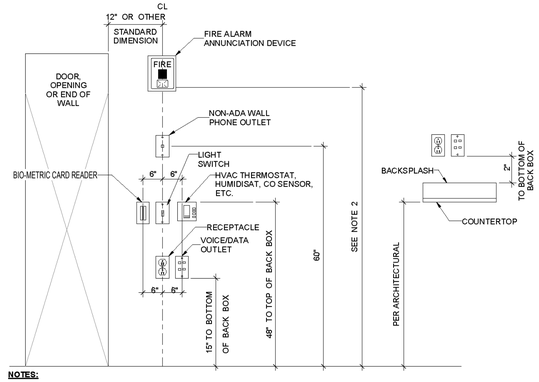
ALL BACKBOXES SHALL BE INSTALLED WITH TERMINAL STRIPS.

LATEST ADOPTED EDITION OF FOLLOWING CODE REFERENCES: ADA - AMERICANS WITH DISABILITIES ACT; IBC - INTERNATIONAL BUILDING CODE; NFPA - NATIONAL ELECTRICAL CODE; NFPA72 - NATIONAL FIRE ALARM AND SIGNALING CODE; ALL FEDERAL, STATE OF PENNSYLVANIA, LOCAL CODES WITH AMENDMENTS, AND ORDINANCES IN EFFECT AS THEY APPLY TO THIS PROJECT.

SYSTEM OPERATION:

1. THE SYSTEM SHALL FUNCTION AS FOLLOWS WHEN ANY SMOKE DETECTOR, HEAT DETECTOR, MANUAL STATION, WATER FLOW DEVICE OR DUCT DETECTOR ACTIVATES. THE FOLLOWING SHALL OCCUR:
   A. SOUND ALL AUDIBLE AND ILLUMINATE ALL VISUAL WARNING DEVICES THROUGHOUT THE BUILDING.
   B. ANNUNCIATE AT THE FACP THE DEVICE / ZONE IN ALARM.
   C. SHUT DOWN REQUIRED HVAC UNITS.
   D. INITIATE ELEVATOR RECALL OPERATIONS.
   E. INITIATE OFF-SITE CALL TO CENTRAL STATION VIA DIGITAL DIALER.

E.C. SHALL BE RESPONSIBLE FOR ALL FIRE ALARM SYSTEM DESIGN AND SHALL BE COORDINATED WITH A NICET LEVEL IV CERTIFIED FIRE ALARM DESIGNER/VENDOR COMPANY PRIOR TO FURNISHING AND INSTALLING FIRE ALARM SYSTEM.

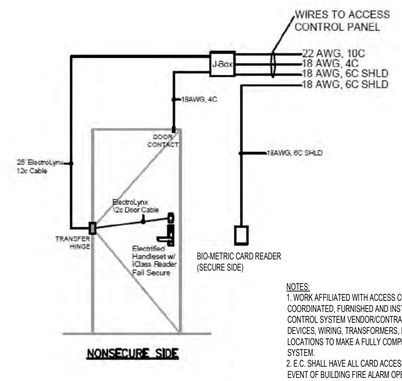


NOTES:

1. DEVICES SHOWN WITHIN 48" OF EACH OTHER ON ALL ELECTRICAL PLANS SHALL BE ALIGNED PER THIS DETAIL. IF DEVICES ARE SHOWN IN MIDDLE OF WALL, THEN CENTER DEVICES ON WALL.
2. MOUNT 80" ABOVE FINISHED FLOOR WHERE POSSIBLE. WHERE CEILING HEIGHTS DO NOT ALLOW THIS HEIGHT, MOUNT 6" BELOW CEILING. WHERE OBSTRUCTIONS DO NOT ALLOW THIS HEIGHT, MOUNT 80" ABOVE FINISHED FLOOR. ALL MOUNTING HEIGHTS FOR NOTIFICATION DEVICES SHALL BE MEASURED TO THE BOTTOM OF THE LENS.

1 DEVICE ALIGNMENT DETAIL

NOT TO SCALE



NOTES:
1. WORK AFFILIATED WITH ACCESS CONTROL SYSTEM SHALL BE FULLY COORDINATED, FURNISHED AND INSTALLED IN FIELD BY E.C. WITH ACCESS CONTROL SYSTEM VENDOR/CONTRACTOR, INCLUDING, BUT NOT LIMITED TOO, ALL DEVICES, WIRING, TRANSFORMERS, BOXES AND CONDUIT HEIGHTS, ROUTING AND LOCATIONS TO MAKE A FULLY COMPLETE AND 100% OPERATIONAL DOOR ACCESS SYSTEM.
2. E.C. SHALL HAVE ALL CARD ACCESS DOORS PROGRAMMED TO FAIL-OPEN IN EVENT OF BUILDING FIRE ALARM OPERATION.

2 ELECTRIC STRIKE DETAIL

NOT TO SCALE

MANNS WOODWARD STUDIOS
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SEAL: COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT A. FRENCK — ENGINEER — PE084123

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, SCOTT A. FRENCK, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF PENNSYLVANIA. ENG. CERT. OF AUTH NO. PE084123 EXP DATE: 9-30-21

CONSULTANT: DEDC — ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088

PROJECT SET: 23A MECHANICAL RE-BID

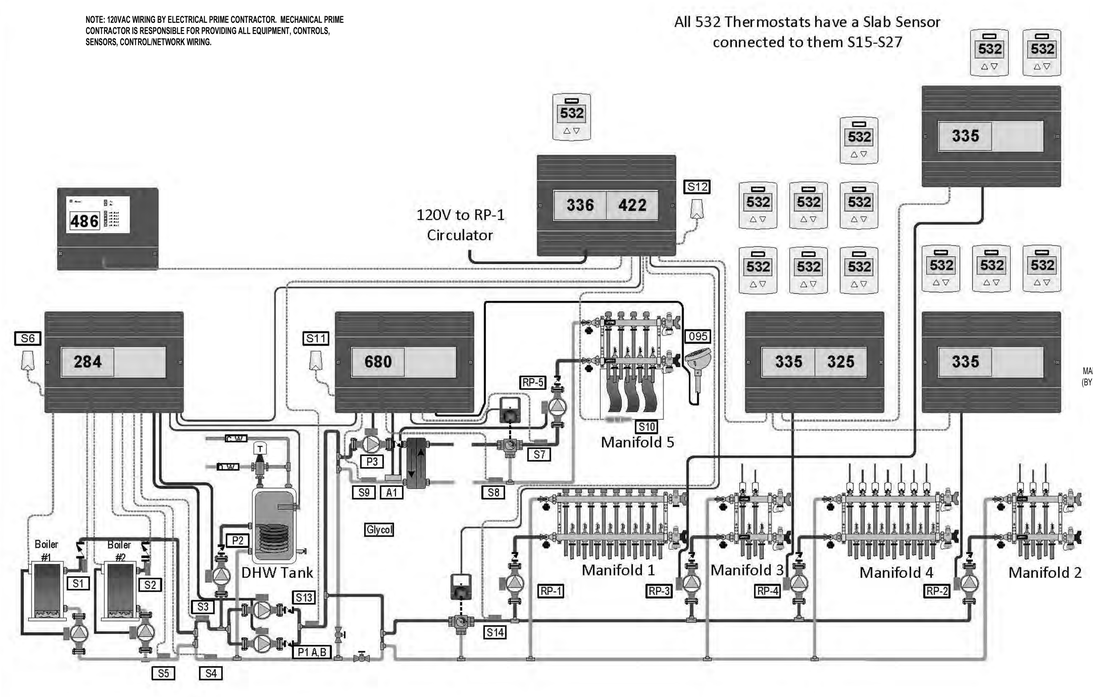
DATE ISSUED: 09/13/2021

DRAWING TITLE: ELECTRICAL LIGHTING FIXTURE SCHEDULE & DETAILS

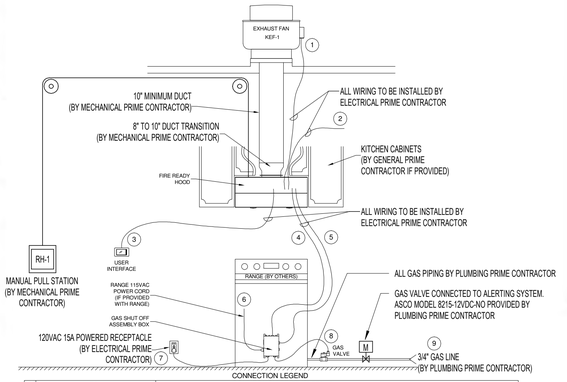
SHEET NUMBER: E6.01

7/2/2021 4:51:21 PM

NOTE: 120VAC WIRING BY ELECTRICAL PRIME CONTRACTOR. MECHANICAL PRIME CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, CONTROLS, SENSORS, CONTROL/NETWORK WIRING.



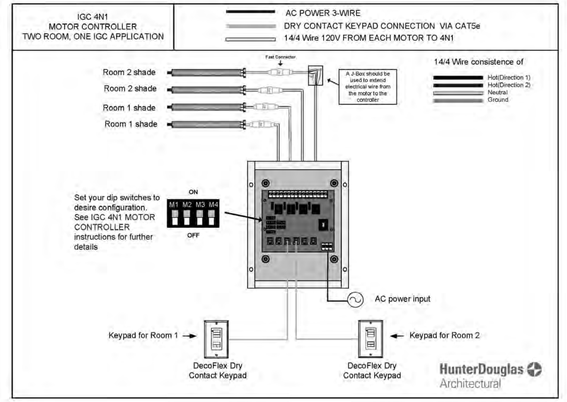
1 RADIANT WATER HEATING DIAGRAM
NOT TO SCALE



CONNECTION LEGEND

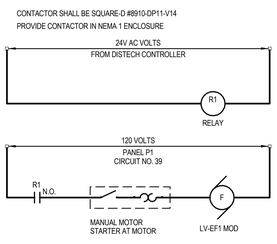
ID	ITEM	ITEM DETAILS
1	FAN	FIELD TO CONNECT FAN KEF-1 TO QC2, PROVIDED WITH 0-10VDC SPEED REFERENCE AND 115VAC RUN COMMAND.
2	HOOD POWER	FIELD TO PROVIDE 115VAC POWER FROM 15A BREAKER TO TERMINAL BLOCKS H1 AND N1 INSIDE HOOD (GROUND TO GROUNDING TERMINAL).
3	SHIP LOOSE USER INTERFACE	8.5 FT PLUG AN PLAY CABLE WITH LIGHT BLUE LABEL COILED UP AND ATTACHED TO HOOD. FIELD TO CONNECT PLUG TO BACK OF USER INTERFACE INSIDE INTERFACE J-BOX.
4	GAS/ELECTRIC DISCONNECT CABLE 1	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 9PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
5	GAS/ELECTRIC DISCONNECT CABLE 2	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 4PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
6	RANGE POWER CORD	PLUG RANGE POWER CORD (IF PROVIDED WITH RANGE) INTO GAS SHUT OFF ASSEMBLY BOX.
7	SHUT OFF ASSEMBLY BOX POWER	PLUG GAS SHUT OFF ASSEMBLY BOX POWER CORD INTO NEARBY 115VAC RECEPTACLE.
8	SHUT OFF ASSEMBLY VALVE POWER	GAS VALVE TO CONNECT TO QUICK CONNECTOR, CONNECTS 5FT GAS VALVE POWER CORD TO 1.5FT CABLE ON GAS VALVE.
9	GAS LINE	PIPE GAS LINE INTO GAS VALVE INLET, THEN OUT OF GAS VALVE OUTLET TO RANGE.

2 KITCHEN HOOD/KEF-1 INSTALLATION DETAIL
NOT TO SCALE

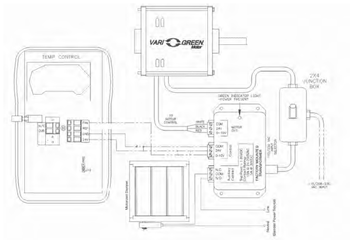


3 MOTORIZED BLIND CONNECTION WIRING DIAGRAM
NOT TO SCALE

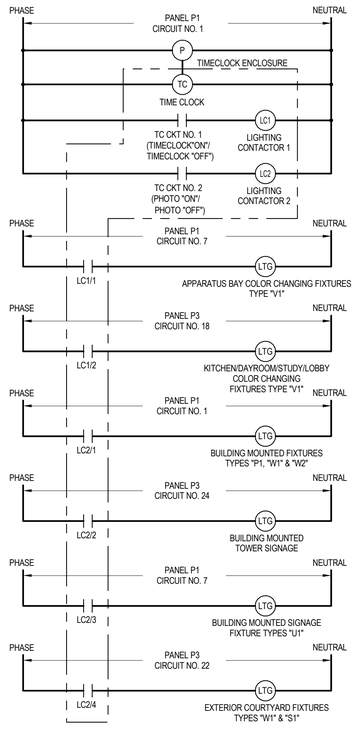
4 2H x 3W CONCRETE DUCTBANK DETAIL
NOT TO SCALE



5 EF1/LV-EF1 CONTROL WIRING DIAGRAM
NOT TO SCALE



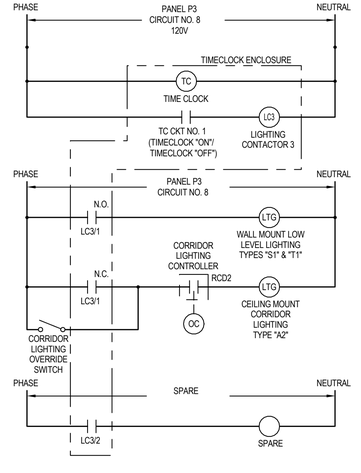
6 EF4/LV-EF4 CONTROL WIRING DIAGRAM
NOT TO SCALE



7 EXTERIOR LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE

LIGHTING CONTROL NOTES:

1. DIGITAL TIME CLOCK SHALL BE TORK #DGLC200A-NC WITH PHOTOCELL #EPC-A INCLUDED, PROVIDE NEMA 1 ENCLOSURE. INSTALL PHOTOCELL ON NORTH EAST CORNER OF BUILDING.
2. E.C. SHALL SET TIMECLOCK TO KEEP LIGHTS OFF BETWEEN THE HOURS OF 8AM AND 5PM.
3. INSTALL SYSTEM PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. LIGHTING CONTACTOR #1 SHALL BE 8903-LG20-V02 AND LIGHTING CONTACTOR #2 SHALL BE 8903-LG40-V02 AS MANUFACTURED BY SQUARE-D OR APPROVED EQUAL



LIGHTING CONTROL NOTES:

1. DIGITAL TIME CLOCK SHALL BE TORK #7200Z PROVIDE NEMA 1 ENCLOSURE. SET TIME CLOCK TIME SETTINGS FOR TYPE S1 & T1 FIXTURE "LIGHTING ON OPERATING HOURS" TO BE ON FROM 7PM TO 7AM.
2. E.C. SHALL SET TIMECLOCK TO TURN LIGHTS ON AND OFF AS COORDINATED WITH OWNER.
3. INSTALL SYSTEM PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. LIGHTING CONTACTORS SHALL BE 8903-LG20-V02 AS MANUFACTURED BY SQUARE-D OR APPROVED EQUAL. CONTACTOR SHALL HAVE N.O./N.C. FOR WIRING BELOW.
5. E.C. SHALL WIRE HALLWAY LIGHTING ROOM CONTROLLERS FEEDING TYPE "A2" FIXTURES TO N.C. SIDE OF CONTACT SO OVERHEAD LIGHTING IS NOT IN USE WHEN LOW-LEVEL LIGHTING IS OPERATING. E.C. SHALL FURNISH AND INSTALL CORRIDOR LIGHTING OVERRIDE SWITCH FOR OVERHEAD LIGHTING CONTROL. (TYPICAL FOR ALL SECOND FLOOR CORRIDORS.)

8 INTERIOR LOW-LEVEL LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE

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SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT A. FRENCK ENGINEER PE084123

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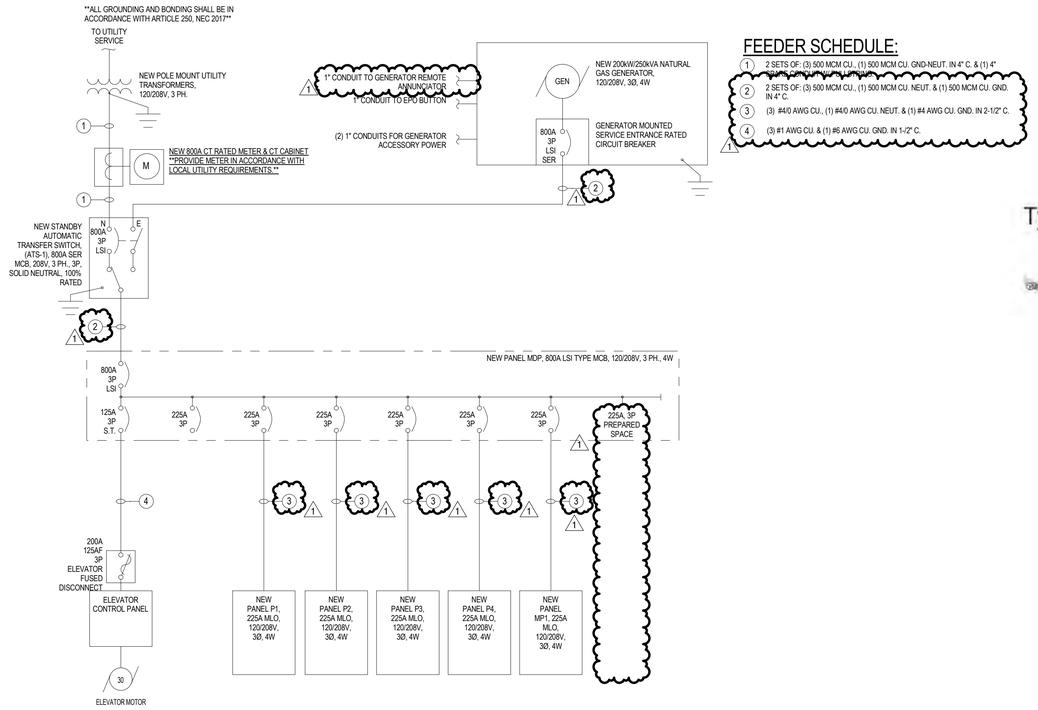
CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ELECTRICAL WIRING DIAGRAMS & DETAILS
SHEET NUMBER: E6.02

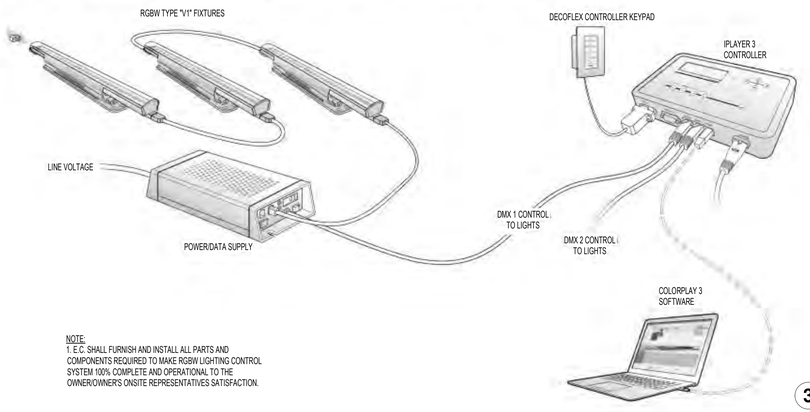
7/2/2021 4:51:25 PM



FEEDER SCHEDULE:

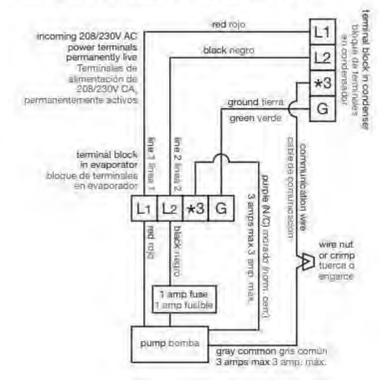
1. 2 SETS OF: (3) 500 MCM CU., (1) 500 MCM CU. GND-NEUT. IN 4" C. & (1) 4" CONDUIT W/ (3) #4/0 AWG CU., (1) #4/0 AWG CU. NEUT. & (1) #4 AWG CU. GND.
2. 2 SETS OF: (3) 500 MCM CU., (1) 500 MCM CU. NEUT. & (1) 500 MCM CU. GND. IN 4" C.
3. (3) #4/0 AWG CU., (1) #4/0 AWG CU. NEUT. & (1) #4 AWG CU. GND. IN 2-1/2" C.
4. (3) #1 AWG CU. & (1) #6 AWG CU. GND. IN 1-/2" C.

1 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
NOT TO SCALE



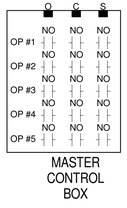
NOTE:
1. E.C. SHALL FURNISH AND INSTALL ALL PARTS AND COMPONENTS REQUIRED TO MAKE RGBW LIGHTING CONTROL SYSTEM 100% COMPLETE AND OPERATIONAL TO THE OWNER/OWNER'S ONSITE REPRESENTATIVES SATISFACTION.

2 IPLAYER CONNECTION WIRING DIAGRAM
NOT TO SCALE

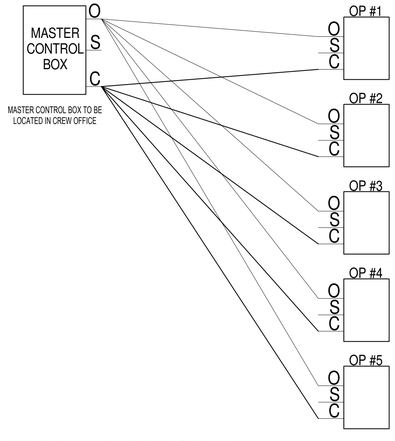


3 VRF CONDENSATE PUMP WIRING DIAGRAM
NOT TO SCALE

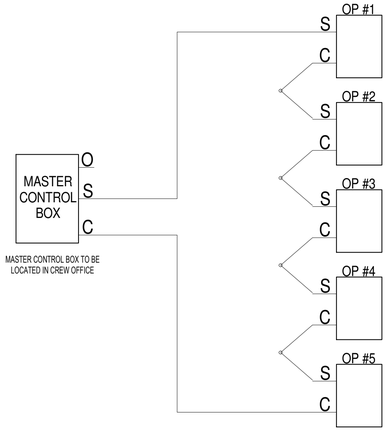
MCB INTERIOR



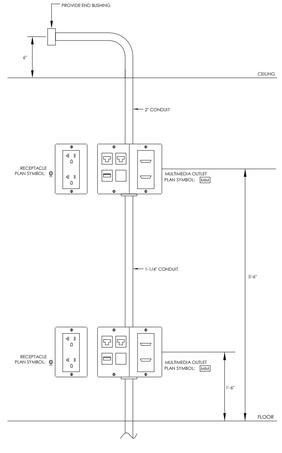
OPEN/CLOSE WIRING DIAGRAM



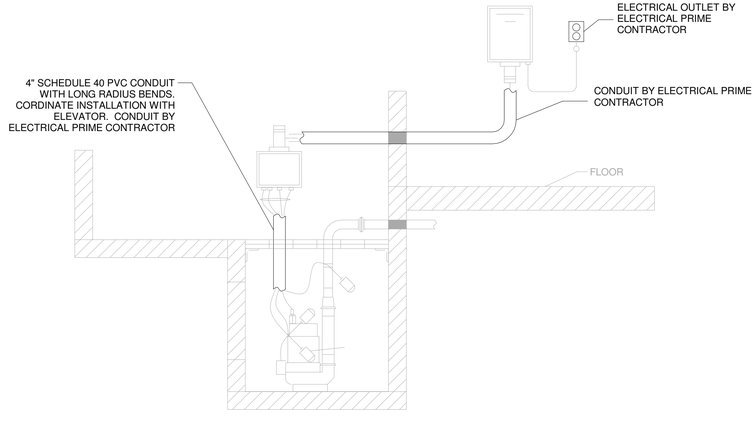
STOP BUTTON WIRING DIAGRAM



4 OVERHEAD DOOR CONTROL WIRING DIAGRAM
NOT TO SCALE



5 MULTIMEDIA OUTLET
NOT TO SCALE



6 SUMP PUMP INSTALLATION DETAIL
NOT TO SCALE

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CONSULTANT: DEDC ENGINEERING DESIGN CONSULTING

MARION STREET STATION, READING FIRE DEPARTMENT
1201 NORTH 9TH STREET
CITY OF READING, PA 19604

NO.	DESCRIPTION	DATE
1	ADDENDUM #5	08/27/21

PROJECT NUMBER: 20-088
PROJECT SET: 23A MECHANICAL RE-BID
DATE ISSUED: 09/13/2021
DRAWING TITLE: ELECTRICAL SERVICE AND SYSTEM WIRING DIAGRAMS
SHEET NUMBER: E7.00

8/24/2021 5:50:17 PM